



A Mellin's Good Baby.



CARE of INFANTS

A MANUAL FOR THE CARE & FEEDING OF INFANTS
FROM BIRTH



TENTH EDITION



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PREFACE

ITAL statistics show that of children born alive, less than three-fourths survive to the age of five years. A considerable proportion of these early deaths is due to infantile diseases, such as whooping cough and bronchitis; but a greater number, however, may be traced to diarrhea, dysentery, convulsions, and wasting diseases. The frightful mortality among infants during the early years of life is undoubtedly either directly or indirectly due to errors in dietary and clothing; and the chief cause of this enormous waste of life, with all its attendant pain and suffering, is to be found in the ignorance of mothers.

When we take into consideration the number of sickly children who survive with enfeebled constitutions, and all the loss and misery which are involved, the importance of a wider knowledge of the means of prevention becomes at once apparent. It is with the earnest endeavour to diminish this awful waste of human life and to reduce this preventable suffering, that the following pages have been written. For it is only with improved knowledge of the causes of the sickness and ill-health of their infants that young mothers may hope to avoid those conditions which tend to rob them of their offspring.—J.P.

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THE CARE OF INFANTS

CHAPTER I.

GROWTH AND FOOD IN EARLY INFANCY

rearing of healthy, vigorous children is a question of the deepest interest to every mother, and one also of the gravest national importance, since the health of the adult is largely determined by the conditions of life during the early years of infancy. Every mother loves to see her baby bright and bonny; she realises soon that its happiness and contentment are closely related to digestion and nutrition. The peevish, fretful, puny babe is usually one whose infantile troubles are truly preventable, for the well-being of an infant depends mainly upon proper food and good hygienic surroundings.

A healthy baby, if born at its full time, weighs a little over seven pounds, and measures about eighteen inches. During the first three or four days of life it will, as a rule, lose weight, in most cases as much as from four to six ounces. After this, if properly fed, it will increase in weight day by day as its bones, flesh, nerves, and other structures are developing, until at the end of

GROWTH IN INFANCY the first year it will weigh eighteen to twenty-two pounds; in fact, during this period it will usually double and often treble its weight. This remarkably rapid increase is quite unparalleled at any other stage of existence, and this fact enables us to gain some idea of the enormous amount of work which must be performed in changing the materials which are taken as food into the body of the rapidly growing babe.

In early infancy the bones, at first soft and gristle-like, become more and more solid; the brain, muscles, lungs, and other organs rapidly increase in size, and each requires therefore large quantities of suitable nourishment for its growth and development. During the early period of infancy, however, there is comparatively little activity of mind and body, the infant's time being largely spent in sleep and the taking of nourishment.

NATURAL OOD OF A 3 INFANT The natural food of a young infant is unquestionably the milk of a healthy mother; and this consists chiefly of water, in which four very different classes of bodies are present, viz., protein, fat, milk sugar, and salts of lime, potash, etc.

The protein material is so called because as food this substance goes to form the real living parts of the body. This is mainly present in the form of caseinogen, the body which gives rise, during the souring of cow's milk, to white clots or curds. Since the proteins furnish substances to the blood which are employed for building up the living and growing structures of the body, deficiency of these materials in an infant's diet makes itself soon evident; the child's development is interrupted, it becomes feeble and pallid, the flesh grows flabby and the disease-resisting strength is reduced.

The fat of milk, which makes up the greater portion of the cream. furnishes to the blood materials which are required for the formation of many parts of the body, including the brain and the THE FOOD nerves. Some of the fat also undergoes chemical changes in the body, and so gives rise to the production of heat, thus aiding in keeping the body warm.

REQUIREMENT OF AN INFANT

The sugar of milk is related to, but not identical with, cane sugar; it is known as lactose. This supplies to the blood substances which are employed in the maintenance of the temperature, and which are also concerned in the formation of fat. From its chemical composition sugar of milk, like all other varieties of sugar, belongs to a class of bodies termed carbo-hydrates.

The salts of milk are the substances which would remain as ash after boiling away all the water and burning the protein, fat and milk sugar. They yield to the blood materials required in the formation of the bones, and different kinds of saline substances necessary for the life and the growth of all other structures.

The water of milk serves to dilute the above-named constituents. and it is the agent by which the constituents of milk after digestion are carried into the blood stream.

Since the above are the materials furnished by nature, in the form of mother's milk, to build up the growing infant's body, next comes the question of the proportion of each. How much protein does a child require? How much fat? How much milk sugar? And here we find our most satisfactory answer in the composition MILK of human milk. Where this substance forms, as it should, the sole nourishment of an infant for the first nine or ten months

COMPOSITION OF HUMAN

THE SALAR LINE STANDING

UMAN MILK VARIES IN MPOSITION

of its life, it must be by the alteration and modification of its components that the widely different structures of the rapidly growing body of an infant are built.

Components of Human Milk.	Maximum %	Minimum %	Mean Average	
Water	91.40	81.09	87:31	
Carbohydrates (Lactose)	8:34	3.88	6.21	
Fat	6.83	1.43	3.70	
Proteins	4.70	0.69	2.29	
Salt	1.90	0.12	0.31	

Compiled from the results of 200 analyses collected by J. Konig, Chemie der Menschlichen Nahrung, und Genusmittel.

Where the supply of breast milk fails, it follows that the artificial substitute which should be resorted to must conform as closely as possible with this substance both in its composition and its properties. Fresh cow's milk is the best basis for such a substitute for breast milk, and it should be modified by means of Mellin's Food.

UBSTITUTE OR BREAST There are no universal rules for feeding infants, since every child is a law unto himself, for whilst some children are born strong and vigorous, others are weak and sickly from birth. There are, nevertheless, certain indications which can always be taken advantage of in modifying the diet in individual cases, and these indications that the food is not proving quite satisfactory are such derangements of the bowels as constipation or diarrhæa, also restlessness and sleeplessness. The weight of the baby from day to day affords also a simple and reliable means of ascertaining the success or otherwise of the method of feeding adopted.

CHAPTER II.

METHODS OF FEEDING INFANTS.

feeding an infant:—

1. Breast-feeding, either by the mother or wet nurse.
The former is the natural method, and should in all possible cases be encouraged. The latter course is only exceptionally

possible, and is open to many serious objections.

ROM birth there are available three chief methods of

METHODS OF FEEDING INFANTS

- 2. Combined feeding, in which case both breast feeding and Mellin's Food prepared to meet the requirements of the child, are resorted to.
- 3. Hand-Rearing, where Mellin's Food is employed to modify cow's milk, so as to adapt it for the use of an infant from birth.

Many circumstances have to be taken into consideration in deciding which of these methods shall be adopted. Every mother should, however, make a serious effort to nurse her infant at the breast.

The demands upon the system of a nursing mother are very great, and she should be supplied with a generous diet of simple foods, with an abundance of milk and a liberal supply of gruels made with milk. Mellin's Lacto is usually much relished by nursing

THE DIET OF THE NURSING MOTHER

LIN'S FOOD R NURSING MOTHERS

mothers as a food beverage, and its use is attended with marked benefit, for it rapidly supplies to the blood materials for use in the production of milk, and so stimulates the flow and improves the quality. It should be prepared by mixing one or two tablespoonfuls of the Lacto in a little hot, but not boiling, water, stirred into a smooth paste, with hot water added until a fluid to suit the taste is obtained.

Mellin's Food mixed with fresh cow's milk is also a valuable nutrient in all cases where the demand exists for the supply of material for the elaboration of milk, and it is employed with especially good results where the milk is either poor in quality or deficient in quantity. Its use in such cases is invariably attended with marked improvement in the flow and character of the milk. Some helpful suggestions may be found in the pamphlet entitled "Mellin's Food for the Adult," which is obtainable post free on application.

ODS TO BE AVOIDED

The diet of the nursing mother should be varied in character; all ordinary easily digested animal and vegetable foods and fruits in season may be taken in moderation, but an excess of meat or green vegetables should be avoided. Strong tea or coffee and alcoholic drinks are also to be avoided. Weak tea and coffee are less objectionable, and may be allowed once a day, but cocoa and Mellin's Lacto taken alone, as directed above, or flavoured with cocoa, are recommended.

RTANCE OF LARITY IN BREAST PEEDING

The wear and tear which are usually incident to the nursing period, and which constitute such a strain upon the physical and nervous forces of the young mother, may be avoided, or very largely reduced, by training the child from the very first into regular habits.

METHODS OF FEEDING INFANTS

BREAST FEEDING.	Interval between meals from 7 a.m. to 9 p.m.	Number of Night Meals from 9 p.m. to 7 a.m.	of meals in	
First day	6 hours 4 hours 2 hours 2 hours 3 hours 3 hours	1 1 2 1 0 0	4 6 10 8 7 6	

Mixed breast and bottle feeding may be advantageously resorted to in all cases where the supply of breast milk appears insufficient, or where the milk is poor in quality, and the child makes in consequence but very slow progress; also to reduce the strain upon the mother involved in continuous nursing. Especially may this plan be adopted during the later months of nursing, in order to facilitate gradual weaning.

THE MIXED FEEDING OF INFANTS

Normal mother's milk is undoubtedly both the natural and the best food for infants, on account of its digestibility and the ease with which its components may be made use of in the infant's system. Unfortunately, however, many mothers are quite unable to suckle their babies, and the following conditions necessitate hand rearing:—

1. Where the quantity of the breast milk is insufficient. The indications of this condition are numerous. In such cases the child will take the breast ravenously, but, failing to obtain sufficient food, soon stops and cries. In a few days the infant becomes peevish, pale and thin, and begins to exhibit the evidences of underfeeding and malnutrition. Such conditions, like all other forms of malnutrition, always predispose

THE CARE OF INFANTS

a child to disease. In such cases, however, mixed feeding may, of course, be resorted to, and the breast meals may be made to alternate with the bottle.

EAST MILK TUSABLE IN CERTAIN CASES

- 2. Where the quality of the milk is poor. In such a case it ceases to rank as food, and if suckling be continued the child's stomach is filled with a fluid which is incapable of affording sufficient nourishment; the flesh soon becomes flabby; and wind, diarrhoea, or constipation occurs.
- 3. Where the mother is suffering from consumption or inherits a tendency to this disease.
- 4. Where the mother is suffering from any other disease, or is in a delicate state, and is taking medicines.
- 5. Where the mother's position in life or occupation interferes with the full performance of the duties of nursing. In such cases the feeding becomes irregular, and the milk will vary in character, and consequently disagree with the infant.
- 6. Where a supply of mother's milk is unavailable. For instance, where the flow of milk is obstructed by retracted nipples, or in the event of the mother's death.

ND-REARED INFANTS

For hand-reared Infants the food best adapted must fulfil the following conditions:—

- 1. It must contain substances which closely resemble the components of breast milk.
- 2. The constituents must be in the proper proportion.
- 3. It should retain the vital principles of natural fresh milk.

- 4. It must be in a form suited to the simple conditions of digestion during infancy.
- 5. The total quantity given during 24 hours must be such as to represent the nutritive value of the amount of breast milk which would under ordinary conditions be given in the same time.

Three-fourths of the infants who die under the age of one year are those fed artificially, and most of these deaths may be traced to errors in feeding or failure to preserve strictly hygienic conditions. A thriving baby, fed artificially as directed in Chapter VI., will appear happy and contented, and will steadily increase in size and weight. It should be remembered that the scales are the best means by which a baby's progress may be estimated. After the first three days, if kept upon a well-balanced and suitable diet, an infant should increase in weight at the rate shown below:—

TEST OF BABY'S

Age.	Total Food taken per day	Gain in Weight,	Total Weight.
1st Month - 2nd ,, - 3rd ,, - 4th , - 5th ,, - 6th , - 7th ,, - 9th ,, - 10th ,, - 11th ,, - 12th ,, -	13 to 15 ozs. 20 ,, 24 ,, 24 ,, 30 ,, 30 ,, 34 34 ,, 36 ,, 36 ,, 40 ,, 40 ozs. and upwards	13 ozs. 30 27 26 21 20 17 23 22 20 11 7	8 lbs. 9 14 ozs. 11 9 13 3 14 8 15 12 16 13 18 4 19 10 20 14 21 9 22

WATCH THE BABY'S WEIGHT

The infant must be fed in such a way as to avoid not only the immediate dangers associated with diarrhoea and acute indigestion, but also the more remote ones of chronic indigestion, scurvy

LECTION OF ARTIFICIAL FOOD

and rickets, and those various complaints which accompany malnutrition; these last it must be remembered are the general predisposing causes of sickness in early infancy. What a child swallows is, of course, important but of relatively little consequence compared with what it digests. One difficulty frequently attending the artificial feeding of infants is that some method of feeding which is apparently accompanied by marked improvement as far as superficial and casual observations are concerned, may in reality be so essentially wrong as to undermine the constitution of the child.

It is only allowable to form an opinion of any method of artificial feeding by the results obtained in a large number of cases, and not by a few exceptional cases which may have done well. It should be remembered that some infants of specially robust constitution on the one hand may have thriven well in spite of bad methods of feeding, and not in consequence of the same, while on the other hand the lives of very many perfectly healthy infants are yearly sacrificed directly or indirectly as the result of improper feeding.

LLIN'S FOOD FROM In this connection it is not to be forgotten that Mellin's Food is a preparation which has been employed with success throughout the world. Medical testimony and public experience are supported by the opinion of analysts, that this preparation when prepared as directed yields a perfect substitute for breast milk from birth for the normal healthy infants that must be hand-reared. The feeding of sick infants must be a modification of normal feeding only; that is why the question of the normal feeding for both infants and young children is of the first importance.

CHAPTER III.

THE USE OF COW'S MILK AS A FOOD FOR INFANTS.

T is only of late years that the question of the preparation of an artificial food adapted to the peculiar digestive conditions of quite young infants has been scientifically studied. With a wider knowledge of physiological laws, and a deeper insight into the composition of foods and the changes which they undergo during digestion, it is becoming more generally recognized that the value of any "food" must be measured chiefly by what it yields to the body rather than by what it contains.

It is agreed that healthy mother's milk may be regarded as the ideal and perfect food for a baby; an artificial food should therefore resemble this very nearly both in composition and properties. All such food materials as arrowroot, cornflour, potatoes, bread, and all such as contain starchy substances in general, no matter how carefully they may have been prepared, are so essentially unlike mother's milk that they act during early infancy as so many irritants, and are in reality poisons. During early infancy starchy foods are directly harmful, for the simple reason that the ferments which are necessary for their digestion are not present in the digestive juices during the period of early infancy.

Mother's milk, the natural food of a very young infant, contains no starchy matter, but a variety of sugar known as lactose. The FOODS CONTAINING

MELLIN'S FOOD STARCHLESS starchy substances of bread, potatoes and other vegetable foods are converted into a variety of sugar in the body of the mother. Nature does not provide at this early stage of life any ferment by which infants are able to digest starch; yet most artificial foods sold for the use of infants, with profound indifference to the teaching both of physiology and chemistry, have starchy substances or even crude flour as their chief components. Mellin's Food is, however, a notable exception, for this preparation is perfectly free from starch.

One should bear in mind the fact that the digestive organs of an infant are exceedingly delicate, and liable to be deranged by apparently trifling causes: but a diet which conforms with the following will give satisfactory results:

- 1.—The artificial food must contain the substances required for the nutrition of all parts of the infant's frame in the proper proportion.
- The constituents of the food should be in such a form that the babe is able with ease to digest and assimilate them.

It must be remembered that while cow's milk is the natural nutriment of the calf, it must be regarded as distinctly an artificial food when employed for infants.

RIATIONS IN COMPOSITION OF MILK The milks yielded by different animals resemble each other as far as their general composition is concerned. That is, they contain flesh, fat, and bone forming substances, and materials which by undergoing chemical changes contribute to the heat of the body. While these are their general points of resemblance, yet they all possess special peculiarities by which they are distinguishable from each other. The various components not only differ as far as proportion is concerned, but these constituents exhibit differences by which they are distinguished from the somewhat analogous substances present in breast milk.

THE USE OF COW'S MILK AS A FOOD FOR INFANTS

The following table shows the comparative composition of human COW'S MILK milk with others which are employed more or less in feeding infants; but cow's milk may be regarded as the only one which is practically available for this purpose.

DIFFERS FROM BREAST MILK

		Water.	Carbo- hydrates.	Fat.	Proteins.	Salts.
*Human **Cow's Goat's Buffalo's Ass's	•••	87.41 88.27 86.88 82.16 90.12	6°21 4°94 4.44 4°77 6°19	3.70 3.68 4.07 7.51 1.37	2·29 3·39 3.76 4·72 1·85	0°31 0°72 0.85 0°84 0°47

^{*} Average of 200 Analyses. J. Konīg. ** Average of 705 Analyses. J. Konīg.

Diluted cow's milk resembles mother's milk in composition and properties, but there are several important differences which render it very undesirable to employ ordinary cow's milk alone for infants.

- 1.—Cow's milk is more difficult to digest than human milk. The total protein material in cow's milk is about one-third greater than in human milk. The protein substances are of two kinds, viz., Caseinogen and Albumen. In human milk the proportion of this albumen is greater than in cow's milk. The main difficulty in the digestion of cow's milk by infants is due to the fact that the casein is largely converted into a curdlike clot in the stomach, where as well as in the intestines it often acts as an irritant.
- 2.—Cow's milk contains less milk sugar than human milk; the latter contains one-seventh to one-fifth more of milk sugar than the former.
- 3.—Cow's milk is often acid in reaction, whilst human milk is neutral and or alkaline. The milk of stall-fed cows has invariably some acidity: while that obtained from pasture-fed animals is often neutral or alkaline. Milk with an acid reaction is never so wholesome for infants, and very frequently produces derangement of the digestive organs. Where Mellin's Food is employed with cow's milk it may happen that the milk supplied is so very acid that a little lime water must be added with the Mellin's Food, although usually the Mellin's Food will impart the desirable alkalinity.

The term condensed milk is applied to a whole class of substances

CONDENSED D EVAPORA-TED MILK which are derived from cow's milk. The immense variability in the composition of the substances which bear the name "Condensed Milk," apart from any other considerations, renders them unsatisfactory as substitutes for fresh cow's milk in the feeding of infants.

We cannot advise the use of condensed milk; but circumstances occur from time to time which render it impossible to obtain fresh cow's milk of satisfactory quality, then condensed milk may be the best substitute as a temporary expedient. It should be remembered that there are two chief classes of condensed milks, the sweetened and the unsweetened, the latter being known as "evaporated milk." It has been our experience that the "evaporated milks" are better for infant feeding than the sweetened brands. And the more reliable brands of unsweetened milk may prove very serviceable for temporary use in special cases. As in the case where fresh milk is used, the proportions of Mellin's Food and condensed milk and water must be varied to suit the individual case.

First, mix the condensed milk with sufficient water to produce milk of ordinary strength, as directed on the label of tin. Then use the milk so prepared, with Mellin's Food and water as directed in the tables given. Do not dip the measuring spoon in the condensed milk, but use a second spoon. After using some of the condensed milk the tin should be kept carefully covered to guard the contents against dust and other impurities. As soon as possible the return to fresh milk should be made. The continuous use of preserved, cooked or heated milk in infant feeding is attended with risk. Such milk is not as nourishing as good, fresh milk, properly modified with Mellin's Food.

THE USE OF COW'S MILK AS A FOOD FOR INFANTS

Sterilized milk is produced by boiling milk, and although the process destroys those germs which give rise to putrefactive changes in the milk, and those also which are associated with certain diseases, there is reason to believe that sterilisation is responsible for many a case of scurvy, because during the process the lime salts are to a considerable extent precipitated. Sterilised milk is therefore largely robbed of its lime, and lime is one of the most important substances necessary for making bone.

STERILIZED
MILK NOT
ADAPTED
FOR INFANTS

Pure milk contains more lime than lime water. Thorough boiling will kill germs in milk, but at the same time it alters the milk greatly. The skin that forms on top of the boiled milk, and which children can rarely be induced to swallow, is the coagulated albumen of the milk. Now the albumen is an extremely valuable part of the milk—it is much the same as the white of an egg, and is the chief flesh-forming material in both eggs and milk. When milk is subjected to a high temperature, it is therefore deprived of a good share of the properties that make it so valuable as a food for young children. They are growing fast, and need nourishment that will make strong bone and firm flesh. Milk makes these two things better than anything else—if it is fresh, pure, and uncooked. All these processes—sterilising, boiling, etc.—have come into vogue, because we now know that milk is a most favourable medium in which germs of every kind can flourish—and these are the simplest methods for combating the development of organisms. disadvantage of these processes is the profound change in physiological balance induced, and the consequent loss of nutritive value. A better plan, though difficult and more expensive of application, consists in securing thorough sanitation in the dairy, combined with efficient cold storage in transit, and the vending of fresh milk only in sealed vessels filled under sterile conditions.

Such a system is now being inaugurated by some of the most progressive milk purveyors, and the care of every nursing mother ought to be to procure milk supplies only from such sources of highest repute as will guarantee that scrupulous care in handling which milk, the most sensitive of all food material, demands.

ASTEURISED MILK

Pasteurised milk is produced by keeping the liquid at a temperature of 68 degrees Centigrade (155 degrees Fahrenheit), for twenty minutes or half an hour. Milk so treated is to be preferred to sterilized milk, but it will only retain its freshness for a very limited time. After heating it is necessary rapidly to cool it. If the low temperature is maintained the milk may be retained for use several days. Even at the ordinary temperature it will remain good for about twenty-four hours, but it should not be preserved for use longer unless it is kept in an ice safe.

Milk to be Pasteurised for the use of children should be placed in a clean bottle, which is put inside any convenient metal vessel, into which cold water should be poured until it reaches the level of the milk in the bottle. The mouth of the bottle should be closed with a plug of clean white cotton wool. It will be found more convenient in practice to raise the bottle containing the milk about half an inch from the bottom of the outer vessel by any convenient means, as this facilitates the circulation of the hot water round the bottle.

The outer vessel should then be placed on a stove and slowly heated until the temperature of the water reaches 155 degrees Fahrenheit, at about which point it should be maintained for at least ten minutes. The vessel should then be taken from the fire. The cotton wool plug should be examined and tightly fixed in the mouth of each bottle, and it must on no account be removed

until the milk is required for use. Immediately the vessel is removed from the fire it should be covered loosely with a piece of clean woollen cloth. It should remain covered for half an hour, at the expiration of which time the bottle should be taken out of the vessel of hot water and put away in a cool place where it should remain until the contents are required for preparing the baby's food.

During the hottest summer weather, and more frequently when travelling, it is not always possible to provide for a supply of fresh cow's milk of absolutely unquestionable origin. In such cases, as a temporary expedient, it is advisable to use a rich milk food, such as Mellin's Lacto, which is prepared from malt, wheaten flour, and rich pure milk. This will be found much safer than relying upon milks of uncertain and possibly tainted origin. or the use of condensed milks as substitutes, which latter, owing to the large amount of cane sugar which many of them contain, are liable to cause serious digestive difficulties and after ill effects with the infants fed upon them. In all cases therefore where cow's milk for any reason falls under suspicion, Mellin's Lacto may be temporarily resorted to. It should be remembered that it may not only be employed as a substitute for fresh cow's milk, but it may with advantage be employed interchangeably with either mother's milk or Mellin's Food, where such a food is temporarily needed.

WHERE FRESH MILK IS UNOBTAINABLE

To prepare Lacto for use, it should be remembered that it merely requires the addition of hot water.

PREPARATION
OF MELLIN'S
LACTO

Place the dry powder to be used in a large cup or small jug. Add a little hot, but not boiling water, and mix the whole into a thin smooth paste, then pour on the rest of the hot water directed above, with constant stirring. The mixture is now ready for use.

THE CARE OF INFANTS

For an Infant about One Month old.

Lacto Two heaping teaspoonfuls. Hot Water Five tablespoonfuls.

This will make sufficient for one meal for an average child. The total amount must be reduced for an infant under one month.

For an Infant about Three Months old.

Lacto One tablespoonful. Hot Water Eight tablespoonfuls.

Increase the proportion of Lacto used gradually until the child is about six months old.

For an Infant about Six Months old.

Lacto Two tablespoonfuls.

Hot Water Fourteen tablespoonfuls.

,	AGE OF INFANT.								
To Prepare One Meal during the		WE	EK.		Month.				
	1st	2nd	4th	6th	2nd	3rd	4th	5th	6th
Mellin's Lacto: Teaspoons Warm Water: Tablespoons	1 3	11/2	2 5	2½ 6	3 7	4 8	5 9	6 10	7 12
Number of Meals in 24 hours	10	10	9	9	9	8	. 8	6	6
Interval between Meals (hours)	2	2	2	2	2	21/2	21	21/2	3
Number of Feeds during Night	2	2	1	1	_	_	_	_	

For Invalids, Nursing Mothers and Adults a somewhat stronger solution should be made in warm water to suit the taste. Milk may be added to the mixture when prepared as above, or it may be flavoured with tea, coffee, or cocoa, to meet the taste and idiosyncrasies of the user.

CHAPTER IV.

NECESSITY FOR THE MODIFICATION OF FRESH COW'S MILK

F the various kinds of milk used as food for infants, that yielded by the cow is by far the easiest to obtain, and is undoubtedly the best basis for an artificial diet. It differs essentially, however, from breast milk in many important respects. It contains a larger quantity of solid matter than mother's milk, chiefly in the form of caseinogen. A notable deficiency in the digestive power of infants is the inability to deal with any mass of solid or semi-solid matter. Some few children, no doubt, thrive upon a milk diet alone. Others, however, and by far the larger proportion, are unable to digest the curd of unchanged cow's milk. Consequently, unless rejected by vomiting, the curd of the milk passes through the body in an undigested condition, and the child starves for lack of nourishment. although swallowing every day a quantity of milk which would furnish ample nourishment for a stronger and older infant.

Cow's milk must therefore be modified before it can so closely resemble breast milk in chemical composition and physiological properties as to be suitable for an infant's use. Since cow's milk contains more caseinogen and less water and milk-sugar than human milk, it becomes necessary to reduce the former and to increase the other ingredients mentioned.

By dilution with water, the proportion of protein matter may be MODIFIED reduced so as to represent the amount in human milk, but the indigestibility of the casein is not in the least overcome, and this undesirable property must be remedied in some other way, since

IGESTIBIL-ITY OF DW'S MILK the proteins are of the utmost importance in the nutrition of infants. The amount of milk-sugar, already smaller in proportion than in breast milk, will be further reduced in the diluted cow's milk, and the mixture will in most cases be acid in reaction instead of alkaline. Heat and force-producing foodstuffs, which are represented by milk-sugar, are absolutely necessary for healthy life and growth. Infants cannot obtain milk-sugar from starchy food, nor must cane-sugar be regarded as a satisfactory substitute for the sugar-of-milk in which cow's milk is naturally deficient. Where cane-sugar is employed it gives rise to acidity and impedes digestion.

The most important difference between cow's milk and breast milk is due to the denseness of the clot formed by the curd of the former. Ample dilution with water does not remedy this defect for under the action of the digestive organs, the particles of casein run together into solid, compact lumps. This is not the case with milk from the breast, for this forms a light, loose, flocculent clot, which is readily disintegrated and digested. This difference is answerable for the trouble and disappointment experienced when attempts are made to rear infants upon cow's milk alone. The difficulty which even the strongest children find in digesting cow's milk is shown by the masses of hard curd which a child fed exclusively upon this diet usually passes daily from the bowels.

In order that cow's milk may be rendered similar to breast milk

- 1.—The casein must be made easily digestible.
- 2.—The proportion of carbohydrate must be increased and casein decreased.
- 3.—The fluid must be rendered alkaline.

Mellin's Food entirely fulfils the conditions which are necessary in a perfect food adapted for the use of infants from birth. It does not thicken the milk, being entirely free from starch, and consequently it forms a perfect substitute for breast milk.

CHAPTER V.

THE FEEDING OF HAND-REARED **INFANTS**

N considering the question of artificial feeding of infants, WHEN TO USE we have three distinct classes of cases to deal with. Firstly, those hand-reared from birth: secondly those who have to be weaned unduly early; and, thirdly, those who are weaned under normal conditions at the age of about ten or twelve months.

MELLIN'S ROOD

For all such infants, cow's milk modified by Mellin's Food is the only proper substitute for mothers' milk.

The two great advantages possessed by Mellin's Food arethat it is perfectly free from starch, and that it makes cow's milk more digestible, rendering it like breast milk.

These properties render Mellin's Food pre-eminently adapted for preparing an artificial diet for a child during the whole of that period of its life when its food should, in the course of nature, be wholly or chiefly milk. All that is necessary in adapting it for the needs of children of different ages is to vary the amount of Mellin's Food employed, according to the age of the infant.

Children of the same age and parentage vary so much that it is IMPORTANCE O impracticable if not impossible to prescribe exact quantities of VARIATIONS food which will meet the bodily demands in all cases. All that can be attempted in the following is to give such general rules as have been found, by wide experience, to work well in average cases. What is well adapted to the requirements of one babe may not suit another, and a careful nurse when she sees the child fretting on food of one strength should gradually vary the

proportions. At the same time it must be borne in mind that it is most undesirable that changes should constantly be made and experiments tried from mere caprice.

3 OF THE JSED FOR INFANTS

It is of the very greatest importance that the cow's milk which is to be employed in preparing an infant's diet should be of good origin, and when once in the house care should be taken of it until it is used. It must be kept in a cool place, covered with muslin, so as to prevent flies, dust, etc., settling on it. Flies come from all kinds of undesirable places, and may carry from dust-bins, manure heaps, and all decomposing materials, many kinds of germs, which will grow and multiply rapidly in milk, and these may give rise to diarrhoea. Therefore keep the milk in a cool place, and if ice is not available, the milk may be poured into a jug which is kept in a pail of cold water, the water being changed two or three times a day according to the season of the year. In hot climates, where it is difficult to keep milk sweet during the night, it should be boiled. As an alternative, the milk may be scalded by standing a cup of milk in a saucepan of boiling water, and leaving the same to stand without putting it on the fire. In any case the milk must be kept cool.

The milk from a herd of cows is generally more satisfactory than the milk from one cow. It is more constant in composition, and is less likely to exhibit those variations which present themselves in the milk from one cow.

RITY OF WATER SENTIAL In hot weather, and in any case where doubt may be thrown upon the purity of the drinking water, the latter should be boiled and allowed to cool before being used for mixing the baby's food.

It cannot be too strongly urged that the most scrupulous care should be taken to secure the cleanliness of all jugs, pots, cups,

THE FEEDING OF HAND REARED INFANTS

spoons, measures or any other utensils which may be employed in the preparation of an infant's food. Most cases of diarrhœa and sickness result from a want of care in this direction.

BOTTLE-FED INFANTS

Perhaps no more common source of danger exists to bottlefed infants than that which arises from the kind of bottle employed. The only permissible form is the slipper or boat shape, without tube of any kind; under no circumstances should a bottle with a long rubber tube be used.

In the Report of the Inter-Departmental Committee on Physical Deterioration it is stated that "a pure supply of milk may be "rendered injurious by dirt in the house, the proximity of con"taminating articles, the general ignorance, in fact, that prevails "as to how milk should be stored and the conditions under which "it is fit for use. One fertile source of contamination was said to "be the use of the feeding bottle with a long india-rubber tube, "which it was impossible to keep clean." This form of feeding bottle has now been declared illegal in many countries, notably Australia, Germany, and some American States.

DANGERS OF BOTTLE-FEEDING

Advantages of the Mellin's Feeding Bottle:—When in use the food is kept in contact with the teat, without an air space, until the bottle is emptied; and the swallowing of air is avoided.

This bottle, being egg-shaped, and the inner surface quite smooth and free from all irregularities, is easy to cleanse and is strong, so that the danger of breakage is very small indeed.

This feeding bottle is graduated to show both tablespoonfuls and the quantity of mixed food required by children at different ages. MELLIN'S FEEDING BOTTLE

EANLINESS ESSENTIAL

It is of paramount importance that the feeding bottle be kept scrupulously clean, and the cleanliness of the Mellin's Feeding Bottle is most easily secured. The best plan, without doubt, is to have two bottles, and after one has been used it should be at once washed thoroughly in hot water, rinsed in running water, and should then be placed in a bowl of cold water until next required. A good plan to follow in hot weather is to place the feeding bottles once a day in a saucepanful of cold water in which a tablespoonful of carbonate of soda has been dissolved and to allow the liquid to come slowly to the boil. Afterwards they should be washed in cold clean running water. It is of equal importance that the teat and plug should be carefully cleansed; the inside of the teat requires washing as well as the outside. The teat should be carefully turned inside out, and every trace of food removed by rubbing between the thumb and finger. Return as soon as clean. and leave in cold water containing a pinch of boracic acid, until required for use again.

The durability of a teat greatly depends upon careful treatment. It should be removed and cleansed directly feeding is concluded. If left long in contact with milk, the rubber becomes soft and gummy, and the teat is quickly rendered useless.

THE IPERATURE THE FOOD

For all ordinary cases the temperature of the food for an infant should be slightly higher than that of the healthy body, from 100 degrees to 102 degrees Fahrenheit. The nurse should always try it before giving it to the babe, and when the liquid is comfortably warm to the mouth it is of the right temperature. Always taste baby's food from a spoon, and never on any account put the teat into your own mouth to test either the mixture or temperature.

CHAPTER VI.

ARTIFICIAL FEEDING FROM FIRST WEEK TO TENTH MONTH

milk simply modified with Mellin's Food. It is impossible to prescribe exact quantities and proportions for a growing child, or to formulate hard and fast rules which could be followed to the letter in every case, since no two children are quite alike in their food requirements or in their powers of digestion. Some children need more nourishment than others of the same age, and the judgment of the mother or nurse must therefore be exercised regarding the proportions of Mellin's

Food, milk and water needed by an infant. When baby is being started upon the substitute for breast milk, it must be given only in small quantity, until the digestive system is educated to deal with the difference in character of the food material. Failure to recognise the importance of gradual changes in baby's diet is responsible for very many failures in hand-rearing. The sudden introduction of large quantities of food material to an infant's diet will immediately set up grave

In preparing the food according to any one of the directions PREPARATION given on pages 33 to 37, and in feeding the child, observe OF MELLIN'S carefully the following important precautions. Remember that Mellin's Food is not a medicine, consequently slight variations in proportions may be made without fear of harmful results.

digestive disorders which may take months of anxious care to

rectify.

HE proper food for hand-reared infants is fresh cow's FEEDING OF HAND-REARED INFANTS

TO MIX LIN'S FOOD FOR USE

- pages for infants of different ages should be made into a smooth paste with a little hot water. The remainder of the water and milk should then be added. Mix the Mellin's Food with the water and milk before it is required for use. If fresh milk can be obtained morning and evening, a good plan is to prepare the mixture in bulk twice a day. When so prepared it should be kept in a cool dust free place, and during the summer season it is of the greatest importance that the mixed Mellin's Food prepared in bulk and reserved for future use should be preserved in a cool place, or preferably in an ice safe.
- 2. Do not add sugar or any substance to thicken the milk. Mellin's Food will not thicken milk, for it contains no starch. Cane sugar is liable to set up acidity in the baby's stomach and should never be part of a baby's diet. Mellin's Food does not contain any cane sugar; its sweetness is due to Maltose, a body closely related to milk-sugar.
- 3. When the child is to be fed stir the mixture and heat enough for one meal to about 100 degrees Fahrenheit. The mixture must not be boiled. Mellin's Nursery Thermometer will be found very useful.
- 4. When the child has had enough, remove the feeding bottle from his sight, and do not feed him again until the time for the next meal.
- 5. Throw away any food remaining in the feeding bottle at the end of of a meal. Never lay it aside to be warmed up again for the next meal.

ARTIFICIAL FEEDING-1ST WEEK TO 10TH MONTH

For an infant during first week the food should be prepared as follows:—

VARIATIONS IN MIXTURE OF

 Mellin's Food
 ...
 ...
 ...
 ½ teaspoonful.

 Fresh cow's milk
 ...
 ...
 ...
 ½ tablespoonful.

 Water
 ...
 ...
 ...
 2½ tablespoonfuls.

FROM FIRST WEEK TO FIRST MONTH

Two or three tablespoonfuls of this mixture should be given every two hours during the daytime, and twice during the night.

Mixture for second week. During the second week of life, night feeding should be limited to two meals.

 Mellin's Food
 ...
 ...
 ...
 1 teaspoonful.

 Fresh cow's milk
 ...
 ...
 ...
 1 tablespoonful.

 Water
 ...
 ...
 ...
 2½ tablespoonfuls.

The amount of the above mixture to be given at a meal in ordinary cases is three to four tablespoonfuls. The average number of meals, eight during the day, two at night. The interval between meals, about two hours. The child should not, however, be awakened to be fed.

Punctuality in feeding. Although precision in amount and punctuality in time should be carefully aimed at in the feeding of infants, yet they need not be rigidly adhered to—slight differences in the demand of the baby will occur from day to day, and these must be met by slight variations in the amount of food given.

For an infant about one month old. As the child grows older, modifications should slowly be made in the mixing of Mellin's Food for use, the milk and water being gradually increased, so that when the child is about four weeks old the following mixture will suit in average cases:—

 Mellin's Food
 ...
 ...
 ...
 \$ teaspoonful

 Fresh cow's milk
 -...
 ...
 ...
 1½ tablespoonfuls

 Water
 ...
 ...
 ...
 3½ tablespoonfuls

This quantity will be sufficient for one meal.

THE CARE OF INFANTS

TO MIX LIN'S FOOD R CHILD OF WEEKS TO R MONTHS For an infant six weeks old. As the child grows older, the Mellin's Food and milk should be still further gradually increased and the water decreased, until the child is six weeks old, when the following proportions may be used:—

Mellin's Food	•••	•••	•••	•••	1	teaspoonful
Fresh cow's mill		•••	•••	•••	2	tablespoonfuls
Water	***				4	tablespoonfuls

The amount to be given at a meal should now be about six tablespoonfuls, and the average number of meals, seven during day, one at night: the interval between meals about two hours.

For an infant two months old. This is the amount necessary in average cases for one meal, and it should be given every two hours.

```
      Mellin's Food
      ...
      ...
      ...
      1 full teaspoonful.

      Fresh cow's milk
      ...
      ...
      ...
      2½ tablespoonfuls.

      Water
      ...
      ...
      ...
      4½ tablespoonfuls.
```

For an infant about three months old. Again gradually increase the Mellin's Food and milk until at three months the following mixture is used:—

```
      Mellin's Food
      ...
      ...
      ...
      1 heaped teaspoonful.

      Fresh cow's milk
      ...
      ...
      ...
      3½ tablespoonfuls.

      Water
      ...
      ...
      ...
      3½ tablespoonfuls.
```

Give from seven to eight tablespoonfuls of the prepared Mellin's Food every two and a half hours.

For an infant about four months old. Increase the Mellin's Food and milk little by little as before, until the child is four months old, when the following proportions will be adapted for average cases:—

Mellin's Food	•••		•••	•••	21 teaspoonfuls.
Fresh cow's mi	lk	•••	•••	•••	5 tablespoonfuls.
Water		•••	•••	•••	4 tablespoonfuls.

ARTIFICIAL FEEDING-1ST WEEK TO 10TH MONTH

Amount to be given at a meal, eight to nine tablespoonfuls; average number of meals, six during day; interval between meals, about two and a half hours.

MELLIN'S FOOD FOR CHILD OF FIVE OR SIX MONTHS

For an infant about five months old. For a child aged five months, use:—

 Mellin's Food
 ...
 ...
 ...
 3½ teaspoonfuls.

 Fresh cow's milk
 ...
 ...
 ...
 5½ tablespoonfuls.

 Water
 ...
 ...
 ...
 4½ tablespoonfuls.

From ten to eleven tablespoonfuls of the prepared Mellin's Food mixed in the proportions given above should be given to the infant every two and a half hours, from 6 a.m. to 10 p.m.

For an infant six months and over. At the age of six months the food should be prepared as follows:

Mellin's Food 3½ heaped teaspoonfuls.

Fresh cow's milk 7½ tablespoonfuls.

Water 2½ tablespoonfuls.

Amount to be given at a meal, from ten to twelve tablespoonfuls of the prepared Mellin's Food about every three hours, from 6 a.m. to 10 p.m.

In changing from one formula to another, as the child grows older, do not make too abrupt a change in the proportions. For example, the formula for three months prescribes one heaped teaspoonful of Mellin's Food; the formula for four months prescribes two and a half teaspoonfuls of Mellin's Food. Do not, on the day on which the child becomes four months old, make a sudden change from one to two tea-spoonfuls of Mellin's Food; but three or four days before he is four months old increase the Mellin's Food by a very slight quantity. Increase it a little more the next day, and so on, until the proper proportion for a four months old child is reached. Make a similar gradual change at

WHEN CHANGING THE FOOD the same time when increasing the milk and when decreasing the water. Make similar gradual changes in lengthening the intervals between feedings.

In all cases where the climatic conditions are such that milk will not retain its freshness for more than a short time, it is better to mix the food freshly for each meal. The proportions suggested below may be taken as suitable in all average cases, but just as infants of the same age differ in vigour and growth, so they vary also in their food requirements, and this should be constantly kept in mind and slight modifications made to meet particular cases.

DIET FROM
TH TO TEN
ONTHS OLD

The following tabulated statement shows the changes which should be made in the preparation of the food and the quantities which should be given to infants of different ages, but it must always be remembered these rules are only proposed for average cases.

Ag of Infa		PREPARATION OF ONE MEAL OF MELLIN'S FOOD FOR INFANT'S USE.						Amount of prepared Food to be given at each meal.		red o be at	Intervals between Meals Day- time.	Night Meals.	No of Meals in 24 hours
		TRASPOONFULS TABLESPOONFULS					TABLE- SPOONFULS		HOURS				
1st W	/ook	Mellin's	Food	2 1	lilk	21	Water	2	to	3	2	Two	10
2nd		1	**	1	**	23		3	to	4	2	Two	10
1st M	onth	2	••	13	**	31	**	4	to	5	2	One	9
2nd		1	**	2		42		6	to	7	2	One	9
3rd		1 heaped	20	35	**	31	••	7	to	8	21	_	8
4th	••	2		5	**	4	**	8	to	9	21	- colonia	8
5th	**	31	••	57	,,	42		10	to	11	21/2	_	6
6th		31 heaped	**	73	**	23	••	10	to	12	3		6
7th		32 level	**	9	**	3	11	12	to	13	3	-	6
8th		4	,.	92	,,	32		13	to	14	3	_	6
9th	[5		12		4	••	14	to	16	3	_	6
10th		54	**	134	**	43		17	to	18	3	_	5

ARTIFICIAL FEEDING-1ST WEEK TO 10TH MONTH

For night feeding and in all cases where milk may be kept sufficiently cool and retain its freshness, it is a better plan to IN ADVANCE prepare several meals in advance, as previously explained. In cold climates it is a good practice to prepare the food in bulk twice a day. This plan renders the milk more digestible, and where adopted the following method may be followed:

ADVANTAGES OF MIXING

To prepare Mellin's Food. Mix at one time sufficient Mellin's Food and milk and water for several meals, and allow the food when mixed to stand in a covered vessel in a cool place. At feeding time stir the mixture and warm sufficient for one meal only to the proper temperature (about 100° F.). but do not boil it. Do not add sugar.

For Infants about One Month old. Dissolve two level teaspoonfuls of Mellin's Food in eleven tablespoonfuls (54 ounces) of water, and add five tablespoonfuls (2) ounces) of fresh milk. This makes enough for four meals. Give four tablespoonfuls (2 ounces) once in two hours. The milk and Mellin's Food must be reduced for an infant under one month.

For Infants about Six Weeks old. Dissolve four level teaspoonfuls of Mellin's Food in sixteen tablespoonfuls (8 ounces) of water, and add eight tablespoonfuls (4 ounces) of fresh milk. This makes enough for four meals, Give six tablespoonfuls (3 ounces) once every two hours.

For Infants about Two Months old. Dissolve four level teaspoonfuls of Mellin's Food in nineteen tablespoonfuls (94 ounces) of water, and add ten tablespoonfuls (5 ounces) of fresh milk. This makes about sufficient for four meals. Give six to seven tablespoonfuls (3 to 3) ounces) once in two and a half hours.

For Infants about Three Months old. Dissolve four heaped teaspoonfuls (or one heaped tablespoonful) of Mellin's Food in fourteen tablespoonfuls (7 ounces) of cold water, and add fourteen tablespoonfuls (7 ounces) of fresh milk. This makes enough for four meals. Give seven tablespoonfuls (34 ounces) in two and a half hours.

For Infants about Four Months old. Dissolve seven teaspoonfuls of Mellin's Food in twelve tablespoonfuls (6 ounces) of water, and add fifteen tablespoonfuls (72 ounces) of fresh milk. This makes about sufficient for three meals. Give eight to nine tablespoonfuls (4 to 4) ounces) once in three hours.

For Infants about Six Months old. Dissolve seven heaped teaspoonfuls of Mellin's Food in five tablespoonfuls (24 ounces) of cold water, . and add fifteen tablespoonfuls (7) ounces) of fresh milk. This makes about enough for two meals. Give ten tablespoonfuls (5 ounces) once in three hours,

E QUANTILL OF MELLIN'S

RIATIONS IN Promiscuous advice is constantly poured out to young mothers. and they are unfortunately only too often ready to follow any new FOOD notion which an irresponsible chatterer may venture, so that the babe has not a fair chance. Every mother should remember, therefore, that where the infant thrives on the above diet she would do well not to interfere with the food. If, however, the infant appears dissatisfied and cries almost immediately after feeding, and exhibits constant restlessness, these symptoms may be taken as indications either of the insufficiency of the food or that it is not rich enough in character. Should these conditions arise, do not change to some other artificial food, but merely increase the quantity of Mellin's Food used in preparing the mixture until the baby is satisfied by its bottle, and becomes contented.

> As the child grows, and the demands made by the various organs of the body for nutritive material become greater, the quantities of Mellin's Food and milk used must be gradually increased. It must, however, be continually kept in mind that a proportion of Mellin's Food sufficient to ensure the thorough digestion of the milk is at all times to be used. With all infants it is best to increase the food very gradually. Abrupt variations are very likely to derange the organs of digestion, and these should be guarded against by care in preparing the food.

IN DIET

The quantity of Mellin's Food to be mixed with milk in order to produce a diet well adapted for children at different ages is a matter of considerable importance. It is difficult-in fact, practically impossible—to give rules which would be applicable in all cases for the preparation of the meal with Mellin's Food, or to prescribe the exact quantity to be given for a meal, since some

infants are healthy, strong, and constitutionally perfect, while others are ailing, weak and without stamina. It is therefore incumbent on mothers and nurses to use discretion in preparing the Mellin's Food. By a little patient experiment, the suitable proportions of the dry powder, milk and water, the right quantity for a meal, and the proper temperature for each individual case may soon be determined; but, as before stated, in all cases it is necessary that an amount of Mellin's Food sufficient to ensure the digestion of the milk should be used.

GRADUAL CHANGE OF DIET

The first sign of indifference, it may be remembered, is a sure indication that the infant has had enough, and the bottle should be at once removed from its sight.

REMOVE THE BOTTLE AFTER THE MEAL

The frequency with which infants are fed is a question equal in importance to that of the quantity of the food to be given at a meal. Care must always be taken that the meals are not too frequent, or too large in quantity. Young mothers are often inclined to overfeed their infants.

The size of an infant's stomach. The average capacity of an infant's stomach is:—

At Birth		•••	***	11 fluid	ounces	2	tablespoonfuls.
Second W	eek	•••	•••	1 1 2		3	
First Mon	th	•••	•••	2	**	4	
Fourth .	,	•••		5	••	10	**
Sixth .		•••	•••	61	••	13	••

It must be remembered that if an infant's stomach be constantly overloaded, even with a digestible diet, the effect is almost as injurious as if the child were fed upon less digestible food in more reasonable quantities.

CAPACITY OF AN INFANT'S STOMACH

QUENCY OF FEEDING

First Week.	Second to Fourth Week.	Second Month.	Third and Fourth Month.	Fifth Month.	Sixth to Ninth Month.	Tenth Mouth.
A.M. 6.0 8.0 10.0 12.0 P.M. 2.0 4.0 6.0 8.0 10.0 A.M. 2.0	A.M. 6.0 8.0 10.0 12.0 P.M. 2.0 4.0 6.0 8.0 10.0 A.M. 2.3D	A.M. 6.0 8.30 10.30 P.M. 12.30 2.30 4.30 7.0 10.0 A.M. 2.30	A.M. 6.30 9.0 11.30 P.M. 2.0 4.30 7.0 9.30 11.0	7.0 9.30 12.0 9.M. 2.30 5.0 7.30	A.M. 7.0 10.0 P.M. 1.0 4.0 7.0	A.M. 7.0 10.0 P.M. 1.0 4.0 7.30

It is a great mistake to accustom a child to take food whenever it cries. When baby is hungry it must be fed, but all cries are not from hunger, and the mother should learn to distinguish them, remembering that a little crying does good, whilst too frequent feeding will do positive harm. The possibility that the child may be thirsty and not hungry seems to be rarely entertained, but some cries are from thirst, and in such cases a teaspoonful of cool boiled water should be given.

When it happens that a baby cannot retain milk, then Mellin's Food may be used dissolved in water alone for a few days. As thus prepared, it may be given cold. When, after a short time, the stomach regains its tone, milk should be very gradually added in mixing the food until the quantity is given which is advised in the directions.

THE MILK

If the discharges from the bowels are green and watery, scald the milk which is employed in mixing the Mellin's Food; dissolve the Mellin's Food in the water, mix with the scalded milk and strain through a cloth.

The condition of the child's stomach and bowels can be easily DIET IN regulated by varying the proportions of Mellin's Food, milk and water. It should be remembered that an infant is ordinarily unable to digest cow's milk; the result may be constination. looseness of the bowels, or the vomiting of curds. If a larger proportion of Mellin's Food is added to the milk and water, it will usually overcome any of these troubles. Mellin's Food when added in sufficient quantity changes the properties of the milk. rendering it digestible.

CONSTIPATION

This trouble is caused by the inability of the child to properly digest the milk, and therefore a larger proportion of Mellin's Food must be added; in some cases it is advisable to decrease the proportion of milk at the same time. Often milk rich in cream will help to overcome the trouble. To get this put into a tall jug twice as much milk as is required for use; allow it to stand two hours, and then pour off and use the top half in preparing the baby's food. Between the feedings, cool water should be given to the baby and should be used freely upon the first indication of constipation. Care should be taken to keep the feet and limbs always warm. With feeble digestion comes constipation, or the opposite effect, viz: - diarrhœa.

A child that is ill with cholera infantum should be under a physician's care, and these directions are only for the preparation of the child's food in such cases. When a baby, sick with diarrhœa or cholera infantum, or much reduced by digestive disturbance, cannot retain milk, no hope of relief can be entertained until this is excluded from the diet, since it seems at such times to act as an irritant. In such cases, Mellin's Food should be prepared with water alone, dissolving a heaping tablespoonful

CHANGE OF DIET IN DIARRHŒA

DIET IN

of Mellin's Food in half a pint of water. As thus prepared, it should be given cold; and if vomiting and purging is severe, a teaspoonful only should be given at a time, repeating it at intervals of ten minutes. When the vomiting and purging have been arrested, the child can be allowed to suck from the bottle. After several hours have elapsed without a return of these symptoms, a little milk may be cautiously added to the diet; this may be gradually increased as the child's stomach can bear it. In the summer diarrhoea of infants, the child may seem to be hungry when, in reality, he is thirsty, and food being given, his stomach is overtaxed and the complaint is aggravated. Cold water, which has been previously boiled, should therefore be frequently given. Cold is a common cause of diarrhoea in children, and care should be taken to shield them from sudden change of temperature.

If the first few meals of prepared Mellin's Food produce a looseness of the bowels, this must not be mistaken for diarrhea, for the evacuations of an infant should be semi-liquid, and in a day or two this normal state will be regularly observed.

CHAPTER VII.

INFANT FEEDING DURING AND AFTER WEANING

HERE an infant is breast reared, a period sooner or later arrives when it must be weaned. This time is determined by a variety of conditions which it would be quite beyond the scope of this little work to discuss. Often before the usual time for weaning, the mother is suffering from the demands upon her system, and the breast milk is poor and deficient; then the child should be alternately nursed at the breast and fed with prepared Mellin's Food. A most important point to notice in reference to the mother is that she will most probably suffer from persistent headaches when the child's suckling is too much for her.

No age can be definitely fixed which would apply in all cases, but if an infant is steadily gaining in weight, and if other conditions are also favourable, it should be nursed until about ten months old and should then be weaned. If possible, the weaning should not be carried out in hot weather, or while the child is distressed by cutting its teeth, or during an illness, even if only slight. When

WARNING TO THE MOTHER

THE PROPER TIME FOR WEANING

VEANING OF BREAST-FED INFANTS

it is decided to wean a breast-fed infant, it should be fed at first with Milk modified with Mellin's Food in the proportions of two heaping tablespoonfuls of Mellin's Food dissolved in twelve tablespoonfuls of water and then mixed with twenty table-spoonfuls of good fresh milk. This will make sufficient for two meals. The quantity of milk may be gradually increased to thirty tablespoonfuls and the water decreased to two table-spoonfuls. It is best to begin by substituting the prepared Mellin's Food for one nursing, and then for two, and then to alternate with breast feeding, and so on until weaning is completed; this takes from four to six weeks.

WHEN THE

Occasionally a breast fed infant will not readily take food from a bottle; in such cases the breast must be refused it entirely, when hunger will usually compel it to take to the bottle. The difficulty may be overcome by dipping the teat in dry Mellin's Food or honey.

The infant being weaned, or a year old if it has been bottle fed, it should have one meal a day of semi-solid food, and very gradually starch-containing foods may be introduced into the daily dietary. Perhaps the best form in which to begin the introduction of starchy materials in a condition easy of digestion is Mellin's Food Biscuits. The diet, however, during all of the second year must still consist largely of milk modified with Mellin's Food—one-and-a-half or two pints a day—which should now be given from a cup or spoon instead of a bottle. It is best to begin the use of solid food at the mid-day meal, which may consist of about eight ounces milk and egg with Mellin's Food, or a lightly boiled egg and a little bread and butter, with a table-spoonful of pudding. All the digestible forms of pudding are useful.

RODUCTION SOLID FOOD

If this is well borne, a further advance can soon be made by adding a thin slice of bread and butter or a rusk or a Mellin's Food Biscuit to the second meal; these should be broken into small pieces and the child taught to chew them thoroughly. When the child has become quite accustomed to these changes in the diet, the first meal should be increased by the addition of a slice of bread or a rusk broken up and soaked in the prepared Mellin's Food. Afterwards the fourth meal may be made like the first. If the child is thriving a fifth meal need not be given.

Weaning from the bottle should always be commenced by the thirteenth month, and by the age of fifteen months the child should take liquid food freely from a cup, except the night feed at about 10 p.m., which for convenience may still be given by means of a bottle.

WEANING OF BOTTLE-FED INFANTS

The more easily digested portions of ripe fruits, such as the pulp of stewed prunes or of baked apples, may be given in moderation with the mid-day meal. At this period of life the fresh juice of a sweet orange is an especially serviceable addition to a child's dietary. If the fruit juice is very sour, it is advisable to sweeten a little by mixing a teaspoonful or more of the dry Mellin's Food with it. Take care that no pips, stones, or rind are given with the fruit pulp. When the infant is a year old, two or three teaspoonfuls may be given an hour before the midday meal and gradually increased to three or four tablespoonfuls.

THE IMPORT-ANCE OF FRUIT IN INFANCY

Between the ages of one and two years, the developing infant is gradually becoming prepared to take and make use of ordinary articles of diet and, as each child is a law unto itself, very careful attention must now be given to the effects of different foods upon the child. Any error in the feeding, with respect to either

quantity or quality, will be quickly followed by a more or less serious derangement of digestion with consequent impairment of the child's vitality. An indication that the food disagrees with the child will be afforded by a change in the character of the stools. Should they become greenish in colour and accompanied by offensive diarrhea, the food and method of feeding should be at once changed. Immediately give cooled boiled water only for one or two meals. In many cases prompt attention to this point will avert the threatened attack. When the symptoms have subsided give only a small amount of food well diluted with boiled water, and gradually increase as the stomach regains tone. Care must be taken to avoid weakening the digestion by over-feeding. Children of this age differ so much in constitutional vigour and consequently in food requirements that it is only possible to deal in generalities, and each case must be carefully watched. For some time after the weaning period all starchy foods must be very thoroughly cooked.

VHEN MEATS MAY BE GIVEN Between eighteen and twenty-four months of age, the child will have cut its first set of double teeth and it may have small quantities of roast beef, beefsteak, roast mutton or mutton chop, or the white meat of chicken. This should be finely minced or scraped and mixed with bread crumbs or mashed potatoes and moistened with some natural meat juice gravy which has exuded from the cut meat. For weakly young children, underdone, finely shredded butcher's meat is to be recommended. Although there should be some variety in the food, care must be taken that it is not too great, for invariably infants thrive best on a plain diet.

The following are some of the common articles of diet which are to be avoided in feeding infants and young children. Hard-

INFANT FEEDING DURING AND AFTER WEANING

boiled eggs, cheese, meats put up in tins, pork, salt beef, duck, FOODS AND goose, ham, bacon, heart, liver and kidney, and all highlyseasoned dishes or rich gravies and soups. Herrings, mackerel. eels, salmon, fresh water fish, crustaceans such as shrimps, crabs, lobsters, and all soft-bodied water animals, such as ovsters, are also to be avoided. Heavy, close or new bread, pastry, sweet and rich cakes, currants and raisins in puddings, nuts, beans, pickles, radishes, turnips, cucumber, celery, onions, mushrooms, or any vegetables which are indigestible should not be given.

Young children should on no account be given tea or coffee. and no alcoholic stimulants should be given, except under explicit medical orders. In cases of indigestion, a little hot perpermint or ginger water should be used, but spirits must be avoided.

DIETARY, TWELVE TO FIFTEEN MONTHS OF AGE.

First meal, about 7 a.m.

About one-half pint of prepared Mellin's Food.

Second meal, about 10 a.m.

About one-half pint of prepared Mellin's Food and a thin slice of bread and butter or two Mellin's Food Biscuits.

Third meal, 1 to 1.30 p.m.

About one-half pint of milk and egg with Mellin's Food (or a lightly boiled egg with a little bread and butter), and a good tablespoonful of sago or tapioca pudding or two or three Mellin's Food Biscuits.

Fourth meal, 5 to 5.30 p.m.

About one-half pint of prepared Mellin's Food with a slice of stale bread broken and soaked in it.

Fifth meal, about 10 p.m., if needed.

About one-half pint of prepared Mellin's Food.

SUGGESTED DIETARY AFTER WEANING

THE CARE OF INFANTS

FIFTEEN TO EIGHTEEN MONTHS OF AGE.

First meal, about 7 a.m.

Three-fourths pint of prepared Mellin's Food in which a slice of stale bread or a rusk has been soaked.

Second Meal, 10 a.m.

One-half pint of milk and egg with Mellin's Food and a slice of bread and butter or a rusk.

Third meal, about 2 p.m.

A cupful of meat broth with a little rice; a thin slice of bread and butter and a tablespoonful of rice or custard pudding.

Fourth meal, about 6 p.m.

Bread and milk with Mellin's Food.

Fifth meal, about 10 p.m., if needed.

One-half pint of prepared Mellin's Food.

EIGHTEEN TO TWENTY MONTHS OF AGE.

First meal, about 7 a.m.

One-half pint of Mellin's Food and a lightly boiled egg with bread and butter.

Second meal, about 10.30 a.m.

One-half pint of Mellin's Food and Mellin's Food Biscuits.

Third meal, about 1.30 p.m.

One-half pint of beef, mutton, or chicken broth or a lightly boiled egg with a thin slice of bread and butter, Mellin's Food, with a saucer of rice or custard pudding.

Fourth meal, about 6.30 p.m.

One-half pint of Mellin's Food and a thin slice of bread and butter or Mellin's Food Biscuits.

INFANT FEEDING DURING AND AFTER WEANING

TWENTY TO TWENTY-FOUR MONTHS OF AGE.

First meal, about 7 a.m.

One-half pint of Mellin's Food and a lightly boiled egg with bread and butter.

Second meal, about 10.30 a.m.

One-half pint of Mellin's Food and Mellin's Food Biscuits.

Third meal, about 2 p.m.

A good tablespoonful of scraped beef or mutton chop or underdone beefsteak, with one well mashed baked potato moistened with two or three tablespoonfuls of dish gravy. A little mashed peas, beans or spinach may also be given.

Fourth meal, about 6.30 p.m.

One-half pint of Mellin's Food and a thin slice of bread and butter, or a saucer of rice or tapioca pudding.

The milk used in preparing Mellin's Food should be raw milk of good quality.

FOODS ALLOWED TWELVE TO EIGHTEEN MONTHS OF AGE.

Mellin's Food and Milk; Mellin's Food Biscuits; Mellin's Food with milk and egg; Mellin's Food with bread and milk; Mellin's Food with soft custard; Mellin's Lacto (see page 24); soft-boiled or poached egg; white or whole wheat (at least a day old), with or without butter; dried bread; oatmeal porridge and milk; prepared wheat cereals; beef, chicken, lamb or mutton broth; beef juice; plain macaroni; cornflour; rice, tapioca or custard pudding; plain bread and butter pudding; blanc mange; junket; rice milk; juice of sweet orange; juice and pulp of stewed prunes; pulp of baked apple.

EIGHTEEN TO TWENTY-FOUR MONTHS OF AGE.

Plain milk toast; scraped or finely minced rare roast beef, beefsteak, lamb chops or roast lamb; baked potato, well mashed, with or without butter or dish gravy; scrambled eggs; plain omelette; fresh peas in their season, thoroughly mashed; beans mashed; fresh spinach; scraped raw apple (perfectly ripe).

(All vegetables should be well-cooked.)

CHAPTER VIII.

CARE OF THE CHILD



HEN awake the child should be kept out of doors as much as possible except in the very coldest and roughest weather.

IMPORTANCE OF FRESH AIR ND EXERCISE When the child is first learning to walk, great care should be taken to guard against its standing on its feet for too long a time, and it should not be allowed to get tired walking. If left to itself it will stand for a while and when tired it will sit down or crawl about. For this reason it should not be encouraged or urged to stand or walk; but its spontaneous efforts should merely be watched and guided. Knock-knees or bow-legs frequently result from much standing and walking before the legs are strong. When it is out of doors vary its amusements by giving it a ride in its carriage part of the time, letting it walk only for short intervals.

Do not urge it or even permit it to lift heavy things, such as would tend to tax its strength. When a child is walking and holding on to an older person's hand, the child's arm should not be stretched to its full length. The grown person should see that the child's hand is not held any higher than its shoulder—even a little lower is better. When a grown person is leading a

child by the hand, it must be allowed to use the leader's hand as a support, and must not be pulled along, but permitted to go as fast or as slowly as it likes.

IMPORTANCE OF CLOTHING

A young child should not be lifted by the arms. The hands should be placed upon its body, one on each side, just below the armpits, and it may then be raised gently but firmly.

The child's clothes should be comfortably loose and should not "bind" it anywhere. Buttons and tapes should be employed; safety pins alone are necessary for fastening the diaper.

The flannel band or binder round the abdomen, which should be about three or four inches wide, must be worn until the child is through teething, or until two and a half or three years old. It should be placed around the child's body under the arms, and should not be tightly fastened, but firmly secured by means of a few stitches, without in the slightest degree restricting the freedom of movement of the body, or interfering with the breathing.

The stockings should not be fastened by means of garters passed round the legs, but by suspenders made of broad elastic. A suspensory band should be fastened round the waist, and to this the upper ends of the stocking fasteners should be attached, the lower ends being fixed to the tops of the stockings.

GARTERS DISPENSED WITH

The child should be warmly clad in winter, and in summer should have as little clothing as is compatible with due protection against extreme heat or chill. It should always, except in the very hottest weather, wear socks that reach a little above the knee. It is of the utmost importance to remember that a child's abdomen and thighs should be properly protected from

DRESS THE CHILD CORDING TO EMPERATURE

chill, and that the chest should not be unduly encumbered with clothes, nor the perfect freedom of movement of the body in any way restricted. There is a very common tendency to overclothe the upper half of a child's body, and to underclothe the lower half. On the very hottest days it is well to clothe the child less in the middle of the day, and to use somewhat warmer clothes in the early morning and late afternoon. Care should, however, be taken that when it is lightly clad it is not exposed to winds or draughts.

The nightgown should be made of stockinet, as common flannel is liable to shrink. The stockinet possesses the advantage that it is much less likely to shrink. The nightdress should be made long, with a running tape at the bottom. Never allow a child to wear a nightgown or any other garment made of flannelette, for this material is highly inflammable.

The shoes should never be the least bit tight, and should be heavier in winter than in summer.

When a child is taken out in its carriage in the winter, the person in charge should ascertain that not only its hands and feet are warm, but that a thick warm blanket is under it as well as over it.

A child of a year old or more should not be put to bed immediately after the six-o'clock meal. It should be allowed to play about quietly for half or three-quarters of an hour before being placed in its cot.

TEMPERATURE OF THE NURSERY

The night nursery should be as large as possible, and it is better for the child to sleep alone. This habit should be induced from early infancy. A window should be open sufficiently—summer and winter—to keep the air fresh all night. This may easily be accomplished by inserting a piece of wood, cut about two or three

inches wide, and long enough to fit at the bottom of the opened window, so that the lower sash may be shut down upon it. air will then pass into the room between the two sashes. The room should not, however, be too cold. It should not be lower than 45 degrees Fahrenheit, nor higher than 60 degrees In winter it is better to have the window sufficiently Fahrenheit. open to insure freshness of the air, and to protect the child by using more blankets: warmth should not be secured at the expense of the freshness of the atmosphere of the nursery. A thermometer should be placed on the wall of the night nursery on a level with the child's head. It should not be near the fire or door, but in such a position that the mean temperature is recorded.

AVOID DRAUGHT

The child's crib must not be in a draught and should not be close to the wall. There should be a space of at least a foot between the wall and the head or side of the crib.

Over the mattress and under the undersheet should be put a piece REST AND of rubber sheeting—about twelve or fifteen inches wide and long enough to stretch across the mattress from side to side and to tuck well in under each side. This, of course, is to prevent the child wetting the mattress. For very young children a piece of flannel placed over the mackintosh is warmer and also soaks up the wet much better. It is difficult and sometimes impossible thoroughly to dry a wet mattress. It is best to have no pillow, or at the most a very thin hair pillow. If no pillow is provided be sure that the mattress is level and is not lower at the head than at the foot. The mattress should also be of hair. If the child has a cold a small pillow is more comfortable than none at all, especially if it sleeps on its back. A child should, however, be taught, if it is possible, to sleep on its side rather than on its back. This keeps

ESH AIR AND SUNSHINE

the stomach and bowels comfortably warm. The hands and feet should be warm at all times. It is better to dress and undress the child in a room warmer than the sleeping room. The temperature should not be lower than 60 degrees Fahrenheit.

In the morning the room and the bedclothes should be thoroughly aired and exposed to the sunlight. Except in the very hottest weather the sun should be allowed to shine into the room all day.

A beeswax polished floor is best; linoleum also forms a good floor surface for a nursery; in any case carpets should be avoided.

The bedclothes should be long and wide enough to tuck well in under the mattress at the sides and at the foot. If the child is restless at night and constantly kicks off the bedclothes and it is not because it is uncomfortably warm, a bedclothes fastener should be employed, or the clothes may be fastened on each side to the mattress by means of a safety pin.

REGULARITY IN SLEEPING HOURS

The child should be put to bed at about six or half-past, and should be taken up at ten o'clock and put on its chair. It should be held out very gently and be put back to bed again at once. A chair with a rubber seat and earthenware vessel underneath which can be taken out and emptied is better than simply a china vessel. The latter is cold and uncomfortable, and disturbs the child more than the rubber seat. Regularity in this respect from early infancy is of extreme importance. The child should be taken up at exactly the same time every evening, and it is less likely to wet its diapers at night if it is put on its chair at regular, frequent intervals during the day.

The morning sleep should be kept up in all cases where possible until the child is four years old, and may be continued with advantage until five. It is a very good thing, if convenient,

to let a child have its morning nap out of doors except during the colder months of the year. A child of a year old is, however, too far grown to sleep with comfort in its carriage, as it cannot lie out straight, but must lie curled up. It should therefore, sleep in its crib. If it can sleep out of doors this way, the crib should be sheltered from the wind in cool weather and from the hot sunshine in summer.

TEMPERATURE OF THE BATH

Up to the time the child is three years old, it should have its bath every day. After that age it should have a bath at least three times a week. Under a year old the water should be from 85 degrees Fahrenheit to 94 degrees Fahrenheit in temperature. but after it is one year old it may be slightly colder. For a child from one to three years old, the water in winter should be from 90 degrees to 94 degrees Fahrenheit, and in summer from 80 degrees Fahrenheit to 90 degrees Fahrenheit. In very warm weather, two or three sponge baths a day will make the child more comfortable. It is impossible accurately to judge the temperature of a bath merely by the hand, therefore the temperature should be ascertained by means of a Mellin's Bath Thermometer. It is a good plan to encourage a baby to breathe deeply by sprinkling it with cold water as it leaves the bath.

The body must be immediately and thoroughly dried after the bath CAREFULLY at all times, and the greatest care is necessary in carrying this BODY out. Every fold and crease of the skin must be carefully wiped, and special attention must be devoted to the fingers and toes, between the legs, under the arms and the neck. Nursery Powder" may be safely and advantageously used after the bath. The child should be bathed always before and never directly after a meal; the best time is just before the second meal in the morning.

CARE OF THE SCALP TEETH AND NAILS Use only the best soap; it should be rubbed on with a sponge and rinsed off in the tub. Where the infant is given two baths a day it is not necessary to soap the whole of the body. Be sparing with the use of soap, but not with the towel.

While the child is very young the head should be washed daily, little soap being used, but when the hair becomes so long that there is a danger of chill after washing, then once a week the child's hair and scalp should be shampooed.

It is very important that the teeth be carefully watched. They should be brushed every day with a small tooth-brush. Once a week they should be cleansed with any mild tooth powder.

Attention should be paid to the finger and toe nails; they should be cut straight across, or an ingrowing nail may result.

REGULAR CTION OF THE BOWELS It is of the greatest importance that regularity should be observed in the general care and feeding of the child. The routine of the day should go like clockwork. The result will be that gradually the child will acquire habits of regularity. Its meals and bath must be given at exactly the same time every day. It should be put to bed at the same time every morning and evening. It should be put on its chair at the same time every day. It is possible to train a child to use its chair at regular intervals at a very early age, and the inculcation of regularity in this respect has an important bearing upon its after well-being.

One of the chief causes of sickness during early childhood is constipation. By slight variations in the diet it usually becomes possible to correct this. In such circumstances always increase the quantity of Mellin's Food used for modifying the milk. Only small increases should be made at a time, and the motions carefully watched until satisfactory conditions are obtained.

CHAPTER IX.

DIET IN MINOR AILMENTS

YOUNG infant's stomach is very small; it holds at first only about a wineglassful. A baby often sucks its food very vigorously, and thus rapidly takes in more than enough to fill its little stomach; consequently it frequently returns the excess by what is known as "possetting," that is, from time to time a small quantity of food slowly trickles from the corners of the mouth. When this condition arises it is necessary that the baby should be kept quiet after feeding. Indeed, most children are systematically overfed, for it is difficult for the young mother to realise how small a child's stomach is.

Where a child is fed upon prepared Mellin's Food and it in any case seems to disagree, the mother or nurse should endeavour at once to satisfy herself whether the fault be with the milk, with the method of preparation of the food or the way in which it is given; or the whole secret may lie in a slight uncleanliness of the feeding apparatus, which has escaped notice. If an infant's digestive organs are for a time so out of order that milk cannot be retained, then Mellin's Food dissolved in cold water only should be used for a few days; it is usually best to give it in small quantities frequently repeated. In some cases Mellin's Food dissolved in barley water has given excellent results. As soon as the stomach gains tone a small quantity of milk should be cautiously added.

CAUSE OF VOMITING

FEEDING IN CASES OF VOMITING

In cases of acute vomiting, attended with retching, some errors in diet are indicated. The causes are as follows:—

- 1. Too frequent feeding.
- 2. The use of improper artificial foods.
- The use of cow's milk rich in curd.

With breast-fed children vomiting is due in most cases to the breast being given too frequently, or to some weakness in the health of the mother. The period between meals should be lengthened, and the mother's health should be attended to. Where infants are fed artificially, farinaceous foods should be discarded, and the milk employed should be subjected to examination. Should the vomiting become persistent, medical aid must be sought. In any case all starchy foods must be abandoned, and Mellin's Food prepared as directed, should be employed until medical advice is obtained.

It very rarely happens that the digestive powers of an infant remain quite normal during the whole of the first year and consequently slight modifications are required in mixing the food from time to time to meet the peculiarities of the child.

INFANTILE DIARRHŒA

Diarrhœa is one of the most serious ailments that a baby can have, and unless it is of a very mild character and the child only slightly out of health, the medical attendant should be sent for.

Where medical aid cannot at once be obtained, a dose of castor-oil, followed by a few drops of sal volatile, will be usually found to check the symptoms. Castor-oil at the early stage of the symptoms of diarrhea is invaluable. Should these simple remedies fail it may be necessary to give Mellin's Saccharinated Solution of Lime. A band of flannel round the abdomen will usually check diarrhea, but the best remedies are modifications in the diet and change of air.

The causes which give rise to diarrhee are varied, and consequently the symptoms to which they give rise differ somewhat in detail. It may be of interest to point out the chief forms of this sickness.

SIMPLE DIARRHŒA

Firstly, simple diarrhoea is generally brought about by unsuitable food. Where the baby is breast fed, then attention should be directed at once to the mother's health.

If the child is being hand-reared, in the large majority of cases it will be found that the distressing symptoms arise from one of three causes—

- (A) The use of farinaceous food.
- (B) Some peculiarity of the milk.
- (c) The use of a bad form of feeding bottle.

A healthy baby for the first six months should have two or three motions in twenty-four hours only; any greater number than this indicates a tendency to diarrhea. At the same time, if the baby does not refuse food, or otherwise seem unwell, it would be advisable to check the activity of the digestive organs. If the motions become more frequent, being passed immediately after food is taken, and if they are watery, slimy, or greenish in appearance, then it is pretty certain that something is seriously wrong. An effort should be made to discover the causes and steps should at once be taken to remove them.

Where the child is hand-reared and a farinaceous food of any kind is employed, then Mellin's Food, which is non-farinaceous, should at once be substituted. If the child is already being reared upon a diet of Mellin's Food, and symptoms of diarrhee make their

CHANGES OF DIET IN DIARRHŒA appearance, in mild cases it will be necessary to reduce the quantity of milk in mixing the Mellin's Food and to substitute lime water for one-third to one-half of the water indicated in the general directions given in chapter VI.

OF DIET IN DIARRHŒA

When diarrhea troubles are thought to be associated with the condition of the milk employed, it is advisable to change the source of supply at once. The water, too, employed in mixing the food is sometimes responsible for the symptoms, and this should be boiled.

In more acute cases, where the infant cannot retain milk, no hope of relief can be entertained until this is excluded from the diet. In such cases Mellin's Food should be prepared with water alone by dissolving a tablespoonful in half-a-pint of hot water, or barley water may be substituted for ordinary water. The addition of a tablespoonful of lime water to the mixture, prepared with barley water, has proved very valuable in some cases of simple diarrhea. As thus prepared, it may be given cold; and if the vomiting or purging is severe, a teaspoonful only should be given at a time. repeating it at intervals of ten minutes. When the vomiting and purging have been arrested, the child may be allowed to suck from the bottle. After a couple of days have elapsed without the return of the symptoms, a little milk may be cautiously added to the diet; this may be very gradually increased as the child's stomach gains vigour. In the summer-diarrhæa of infants the child may seem to be hungry when, in reality, it is thirsty, and, food being given, its stomach is overtaxed and the complaint is aggravated. In such a case cold water may be given.

Another form of diarrhoea commonly seen in infants is marked by the rapid passage of the food through the stomach and bowels, from which it is excreted often apparently unchanged, in curd-like masses. The infant suffering from this form of diarrhœa usually has frequent attacks of sickness, and suffers from violent griping pains. The condition is usually set up by the irritation caused by improper food or by exposure to cold. In the early stages a small dose of castor oil, given in the form of an emulsion, is helpful.

Inflammatory diarrhea is the most dangerous form, for in this condition more or less acute inflammatory changes of the coats of the stomach and bowels are set up. The object of the mother should be to establish safeguards against this complaint by the study and practice of hygienic conditions. The questions of treatment and cure lie beyond the scope of this little work, but it may be pointed out that preventive measures are in the direction of attention to diet and clothing.

Quite young children are not infrequently attacked by dysentery. The symptoms which are most likely to make their appearance in the hot weather are fever, much looseness of the bowels with straining, the passage of viscid or slimy motions, charged with much mucus, and, in the latter stages, blood; the griping is very marked and the straining violent. The infant suffering from this condition rapidly loses flesh, becomes pale and exhausted. This disease takes but a few days to reduce even a robust and vigorous child to an emaciated condition. A warm bath is always soothing, and often does good, and in any case the child should be kept warm and sleep induced. A favourite remedy is white of egg beaten up in milk or water; this is nourishing, and somewhat binding in its action. Since, however, this condition is attended with considerable danger, medical aid should be obtained as soon as possible.

PREVENTION OF

CAUSES OF CONSTIPATION IN INFANTS Cold and errors in diet are the common causes of diarrhæa in children, and care should be taken, on the one hand, to shield them from all sudden changes of temperature, and on the other, to select a suitable diet, which should be properly prepared.

Constipation is the condition in which the motions become hard and changed in colour. Many young infants suffer from this ailment, yet few mothers treat the matter with the serious and immediate attention which it deserves. The conditions which give rise to these distressing symptoms in infants may arise from various causes, and it is well that the mother should make an effort to ascertain the source of the trouble. The most common causes of constipation are errors in diet. Where the child is being fed from the breast, it will be found that the mother's health is out of order, and a little attention to this matter will lead to the disappearance of the symptoms in the child. The remedial measures which the mother should adopt lie in the direction of more exercise, increased vegetable food, and doses of Mellin's Pure Fluid Magnesia or Mellin's Cascara Pastilles.

In the large majority of cases of hand-reared infants, a tendency to constipation makes its appearance during the first few weeks of life in consequence of the use of improper artificial foods. Farinaceous foods act as irritants to the bowels; and where they are employed, constipation is frequently associated with short and intermittent attacks of very offensive diarrhea. The child should in such a case at once be placed upon a diet of Mellin's Food, prepared and employed according to the age, when the symptoms will usually disappear.

CHANGE OF DIET IN ONSTIPATION Again, where an infant is reared upon Mellin's Food, constipation is sometimes caused by an inability on the part of the child in

DIET IN MINOR AILMENTS

certain cases to digest the milk, and therefore a larger proportion of Mellin's Food must be added in preparing the food. In other cases it is advisable to decrease the proportion of milk at the same time. Between the feedings cool water should be given to the baby, and should be used freely upon the first indication of constipation. Great care should be taken to keep the feet and limbs protected and warm.

PREVENTION OF CONSTIPATION

It is a bad plan to give purgatives to infants, for they tend to lower the tone of the digestive canal. By slight variations in the proportion of the ingredients of the food it usually becomes possible to correct constipation. A spoonful of ripe orange juice two or three times a day may prove beneficial. Where such means fail, then such gentle laxatives as Mellin's Pure Fluid Magnesia may be given with advantage. Where the symptoms are very pronounced and persistent, an ordinary aperient may be used-Mellin's Tasteless Castor-oil is one of the best, given in doses of half to two teaspoonfuls according to the age and condition of the child. Mellin's Glycerine Suppositories will induce easy evacuations without fatiguing the stomach. Much may be done, however, to prevent constipation, by care in inducing regular habits both in feeding and excretion. An infant should be fed at regular intervals and held out at the same time each day. A child's bowels for the first six months ought to be opened from two to four and not more than five times in the twenty-four hours. The excreta should be neither hard nor very fluid, and they should be of a bright vellowish-brown colour. The quantity of urine passed by an infant is, proportionately, greater than that of an adult; in appearance it should be clear and of a very pale straw colour, not cloudy.

WATCH THE INFANT'S MOTIONS

Constipation is sometimes caused by chills. This form is common among weakly children; it is usually accompanied by loss of appetite and the passing of solid clay-coloured or pale motions. The best remedial measures are:—

- (A) Change of Diet. Dilute Mellin's Food.
- (B) Hot fomentations over the belly and gentle rubbing.
- (c) Warm clothing and protection from draughts.

Another form of infantile constipation which is extremely common arises from a want of muscular tone, or weakness of the muscular coats of the digestive canal. The employment of abdominal friction coupled with a liberal diet of Mellin's Food, prepared as directed according to the age of the infant, will usually remove the symptoms.

If the motions are very solid and cause pain, the abdomen should be rubbed with the hand, or with some oily substance, such as ordinary salad oil. The friction should begin at the right lower portion of the abdomen and pass upward and to the left, down and back again in a somewhat elliptical fashion. It should be continued slowly, gently, but firmly for ten to fifteen minutes.

CAUSES OF FLATULENGE OR COLIC

Flatulence is closely connected with indigestion, and although quite without danger, it often causes the child considerable pain. Flatulence may be due to a variety of causes, viz., the use of stale or tainted milk, over feeding, irregular times of giving the bottle, cold food, chills due to long exposure in bathing, etc. The carelessness of nurses has much to answer for in this matter. They frequently allow babies to suck the teats of empty feeding bottles, and often bind their little charges too tightly, both of which causes tend to induce flatulence. When the symptoms are slight, the child should be laid on its back, and gently but

firmly rubbed; a warm bath will frequently give relief. A change in the proportion of Mellin's Food in the diet and attention to the points mentioned above will usually be followed by the disappearance of the symptoms. Peppermint Cordial is very useful in cases of flatulence in infancy.

The symptoms are: violent screaming, without any apparent cause; the legs are drawn up; the forehead is wrinkled, and the child has an anxious look; the motions become slimy and usually greenish in colour. In the case of breast-fed children the cause of this griping is frequently to be found in some errors in the dietary of the mother. It cannot be too strongly urged that the diet of a nursing mother should be simple and nutritious, without great variations.

In the case of hand-reared infants carelessness on the part of the nurse in preparing the food—such as the use of sour milk, or of a bottle which has been but imperfectly cleansed—is a frequent cause of stomach-ache, and such errors should be carefully guarded against. Where griping arises from over-feeding, then the best remedy is a dose of castor oil.

TREATMENT
IN CASES OF
FLATULENCE

Protrusion of the Bowels may be caused either by constipation or diarrhoea. The bowel comes down through the anus, forming a reddish swelling, which may be no larger than a small nutmeg, or quite as large as a pigeon's egg; it may bleed slightly, and cause in any case a great deal of pain.

To return the bowel press up firmly by means of a sponge which has been wrung out in cold water. When the bowel has come down once it is always liable to do so again; care should therefore be exercised over the infant every time it has a motion. Efforts should be made to remove at once any tendency to

TREATMENT
IN CASES OF
PROTRUSION

CAUSES OF THRUSH constipation or duarrness. A cold sponge bath every morning will help to strengthen the child, and carefully bathing the parts it cold water after the bowels have acted improves the muscular tone

Thrush, also known as white mouth, is a peculiar form of inflam mation of the lining membrane of the mouth, which frequently occurs in infants, more particularly in those reared by hand. The complaint is due to the growth of a fungus, and it is essentially preventable. The organism grows freely in milk which has undergone decomposition, and its development is promoted by a want of cleanliness. The fungus grows in the crevices of feeding-bottles and other utensils which have contained milk. The signs of thrush are numerous irregular roundish white specks on the inner surfaces of the lips, gums, palate, and cheeks. Each little spot is surrounded by a deep reddish space, and is so tender as to cause great pain in swallowing, and the child experiences such difficulty in suckling that it refuses the breast or bottle. These symptoms are usually accompanied by a certain amount of redness and soreness between the legs.

After the meal the child's mouth should be wiped out with warm water in which a pinch of carbonate of soda has been dissolved. The mouth should then be cleansed by means of a camel-hair brush or soft linen soaked in a mixture of borax and glycerine. When the thrush has declared itself, all milk must be carefully boiled, and a few grains of carbonate of soda or carbonate of potash added to each meal. All the food utensils must be thoroughly cleansed, using a little boracic acid in the washing water. The rubber teats and valves in use should be discarded and new ones procured immediately. Where the symptoms are accompanied by vomiting it may become necessary to substitute beef-tea or chicken broth, or barley water for milk.

CHAPTER X.

SIMPLE FOODS FOR YOUNG CHILDREN

Ingredients :- Mellin's Food, two heaping tablespoonfuls; hot water, two MILK AND tablespoonfuls; milk, sufficient to make a pint; dissolve the Mellin's Food in MELLIN'S FOOD the hot water and mix with the milk.

To prepare :- Place the Mellin's Food in a jug, add a tablespoonful of hot, not boiling, water, and stir the whole into a paste; then add the rest of the hot water and stir again; next add the milk, with constant stirring.

Ingradients: One thick slice of bread; half a pint of milk; Mellin's Food to taste.

BREAD AND MILK

To prepare:—Cut the bread into cubes; place the same in a small basin: pour on boiling milk; allow to stand for a few minutes covered; sprinkle Mellin's Food and a little salt over when served.

Ingredients: -One breakfast-cupful milk: one tablespoonful cornflour: one tablespoonful butter; one saltspoonful salt; two tablespoonfuls Mellin's Food: two slices well-browned toast.

MELLIN'S FOOD MILK TOAST

To prepare: Dissolve the Mellin's Food in one tablespoonful of water. Scald the milk. Melt the butter in a saucepan, and when quite hot, stir in the cornflour; then pour in the hot milk, slowly beating all the time, until a smooth cream is formed. Bring to the boil and remove quickly from the fire. Add the salt, and allow to cool a little. Toast two slices of bread to a nice rich brown, and lay upon a deep plate.

Ingredients: - Milk, one half-pint; six or eight Mellin's Food Biscuits.

To prepare:—Bring the milk to scalding point, about 140° F., place the biscuits in a breakfast cup or small basin and pour over them sufficient of the hot milk to cover them (about five tablespoonfuls). Allow them to stand six minutes, then with a spoon mix the softened biscuits into a smooth paste, and finally add the remainder of the milk.

MELLIN'S FOOD BISCUITS AND MILK

Ingredients:—One egg; one tablespoonful Mellin's Food; one pint milk. To prepare: -Beat egg well, turn on to the Mellin's Food, previously dissolved in a little warm water, mix thoroughly and add the milk.

MILK AND EGG WITH MELLIN'S FOOD

Ingredients:—The white of one egg; two tablespoonfuls of milk; one dessertspoonful Mellin's Food.

WHITE OF EGG AND MILK

To prepare:—Boil the milk and let it cool; whip the white of egg and put into a tumbler, dissolve the Mellin's Food in a little warm water; add this to the milk, then add the whole to the beaten egg and stir.

BLANC-MANGE (CORNFLOUR)

Ingredients: -- One-fourth teacup cornflour; one pint milk, one dessertspoonful sugar; two tablespoonfuls Mellin's Food,

To prepare: -Add sufficient milk to the cornflour to produce a smooth paste; put the remainder of the milk on to boil; pour the boiling milk on to the cornflour paste; return the whole to the saucepan and boil gently with constant stirring for ten minutes; after well boiling remove the saucepan, add the sugar and Mellin's Food, and stir again well for a few seconds; pour into a mould previously rinsed with cold water.

SIMPLE FOODS FOR YOUNG CHILDREN

ANCLMANCE (RICE)

Ingredients: - Half-a-teacupful of ground rice; one pint of milk; one dessertspoonful 'sugar; two tablespoonfuls Mellin's Food; a strip of fresh lemon rind.

To prepare: Follow the directions given above for Cornflour Blanc-Mange. It should be remembered that cornflour and rice must be very thoroughly boiled in order to cook the starch and render it digestible. A little Mellin's Food may be sprinkled over the Blanc-Mange when served.

LANC-MANGE (IRISH MOSS)

Ingredients:—One fourth teacup of Irish or Iceland moss: one pint milk: a pinch of salt; one tablespoonful of Mellin's Food

To prepare:—Soak the moss in cold water a few minutes, then pick it over carefully and wash. Tie in a muslin bag, put with the milk into a double boiler and boil until the milk thickens when dropped on a cold plate. Add the salt and take out the bag, first pressing it gently; then turn the thickened milk into a mould. Eat with sugar and cream and Mellin's Food.

AIN JUNKET ils is sometimes lled "curds and wher

Ingredients: -- Half-pint good milk; rennet; one tablespoonful of Mellin's Food.

To prepare:—Take one half-pint of raw milk and heat it lukewarm; then add a teaspoonful of Essence of Pepsin or Liquid Rennet and stir the mixture thoroughly; pour into custard cups and let it stand until firmly curdled.

STARD WITH

Ingredients: -One half-pint milk; one egg; one dessertspoonful of ELLIN'S FOOD sugar; one dessertspoonful of Mellin's Food; a pinch of sait.

> To prepare: - Dissolve the Mellin's Food in a little warm water: put the milk into a double saucepan and allow it to become scalding hot; beat the egg thoroughly and add the scalding milk to it gradually, then return the whole to the double boiler; add the Mellin's Food, sugar and salt, and cook for two or three minutes, stirring constantly; this can be varied by beating the white and volk of the egg separately; proceed as above, only reserving the stiffly beaten white and stir into the custard just before taking from the fire.

CUSTARD

Ingredients: - One teacupful of fresh milk; one egg; one tablespoonful PUDDING of sugar; one tablespoonful of Mellin's Food; a pinch of salt.

> To prepare:—Beat the egg slightly in a basin, add the milk, sugar and Mellin's Food; pour into a buttered pie dish and bake in a moderate oven for thirty minutes. If quickly baked it will become full of holes and watery. It must not boil.

CUSTARD PUDDING

Ingredients:—Two cups fresh milk; two eggs; one teaspoonful sugar; two tablespoonfuls of Mellin's Food; a pinch of salt.

To prepare:—Beat the eggs slightly, add the sugar and Mellin's Food and whip them together until smooth and creamy. Stir the milk (salted very slightly), pour into a bake dish and set this in a dripping-pan full of boiling water until the middle of the custard is "set", take directly from the oven; eat cold.

Ingredients:—Two tablespoonfuls pearl tapioca; one pint milk; two eggs; two tablespoonfuls Mellin's Food; a little sait.

SIMPLE FOODS FOR YOUNG CHILDREN

To prepare:-Pick over and wash the tapioca and soak in warm water until it has thoroughly softened; then add the milk and boil in a double saucepan until the tapioca is transparent; beat the yolks of the eggs and Mellin's Food together, turn the boiling tapioca upon them and return to the fire for three or four minutes; take from the fire, add the whites of the eggs beaten very stiff and mix thoroughly. If one egg only be used, the cream will still be very palatable.

Ingredients: -Two tablespoonfuls rice: two tablespoonfuls Mellin's Food: two coffee cups (one pint) milk; one tablespoonful sugar; one-half teaspoonful salt.

RICE MILK

To prepare:—Wash the rice and put with the milk and salt into a double saucepan; cook until the rice is very soft and has absorbed most of the milk; when almost done, add the Mellin's Food dissolved in a little hot water. and the sugar.

Ingredients:—Half-an-ounce of sheet gelatine; one pint of milk; one dessertspoonful of sugar; two tablespoonfuls of Mellin's Food; strip of lemon rind.

MILK JELLY

To prepare: -Place the lemon find in the milk in a small enamelled saucepan, bring it carefully to the point; when boiling pour it on to the gelatine in a basin and stir gently until the whole of the gelatine is dissolved: then add the Mellin's Food and sugar and stir again until the whole has the consistency of cream; set in moulds previously rinsed in cold water; when firm dip the moulds quickly in hot and then into cold water and turn out for use. Unless the milk jelly is allowed to partly thicken before being placed in the moulds it will separate out.

Ingredients:—One-half teacup raw rice: three teacups cold water; one RICE IELLY teacup fresh milk; one-fourth teaspoonful salt, piece of soda, not larger than a pea, dropped into the milk.

To prepare: - Wash the rice and then soak it for four hours in just enough water to cover it; add, without draining, to the cold water; bring to the boil in a double saucepan and cook until the rice is broken all to pieces and the water reduced to half the original quantity; add the milk and simmer, covered, for half-an-hour; strain through coarse muslin, pressing and twisting hard: sweeten slightly and use when it has cooled sufficiently.

Ingredients: - Half-a-teacupful of coarse oatmeal; one quart of water.

OAT JELLY

To prepare: -Soak the oatmeal in one quart of cold water for twelve hours; at the end of this time boil down to one pint and strain through fine muslin while hot; keep the resulting jelly on ice until needed. Serve with Mellin's Food sprinkled over.

Ingredients: -Three tablespoonfuls of raw rice soaked three hours in cold RIGE PUDDIN water; two cups milk; a little salt; one beaten egg.

SIMPLE FOODS FOR YOUNG CHILDREN

To prepare:—Drain the rice in a colander lined with a piece of coarse cloth and put it in a double saucepan with enough cold water to cover it; add the salt; cover closely and steam until soft, shaking up the inner kettle now and then but never putting a spoon into it. When rice is cooked in this way each grain will keep its shape and be separate from the rest. Try one to see if it is quite tender before taking the vessel from the fire. Should the water not be entirely absorbed, drain off what is left; shake up the rice that it may lie lightly and loosely and pour in the milk. This, warm but not scalding, should be ready in another saucepan. Return to the fire; simmer fifteen minutes, boil up well once; turn into a bowl and beat in the frothed egg at once. Sprinkle over the surface when served Mellin's Food to flavour, or eat with cream and sugar.

ELLIN'S FOOD to alternate with ice or Oat Jelly Ingredients:—Four teaspoonfuls of Mellin's Food; six fluid ounces milk (12 tablespoonfuls); two fluid ounces water.

To prepare:—Mix the Mellin's Food with warm water; then add the milk, with constant stirring.

OATMEAL PORRIDGE OLLED OATS) Ingredients—One breakfastcupful iboiling water; half-a-teacupful of rolled oats; half-a-teaspoonful of salt.

To prepare:—To one breakfastcupful of boiling water add half-a-teaspoonful of salt and half-a-cupful of rolled oats. Boil two hours in a double saucepan and strain through a sieve. For a child about fifteen months old, two or three tablespoonfuls of the strained part is enough for one meal, the rest being saved to eat for another meal. To the part used, add enough milk with a little Mellin's Food dissolved in it to make a soft oatmeal pulp. For a child two or three years old, three or four tablespoonfuls of the strained oatmeal may be given at a meal. Add just enough milk with Mellin's Food to soften it.

OATMEAL PORRIDGE (ORDINARY OATMEAL) Ingredients:—Two teacupfuls of boiling water; half-a-teacupful of coarse oatmeal; half-a-teaspoonful of salt.

To prepare:—To two teacupfuls of boiling water add one-half teaspoonful of salt and one-half teacup of coarse oatmeal; boil four hours in a double saucepan and strain through a sieve. For a child about fifteen months old two or three teaspoonfuls of the strained part is enough for one meal, the rest being saved to heat for another meal. To the part used, add enough milk with a little Mellin's Food dissolved in it to make a soft oatmeal pulp. For a child two or three years old, three or four tablespoonfuls of the strained oatmeal may be given at a meal. Add just enough milk with Mellin's Food to soften it.

APPLE STEW

To prepare:—Pare and slice three or four ripe apples, pack them into a porcelain dish, cover barely with cold water to prevent scorching, cook gently in the oven until they are very soft. Turn out into a bowl and mash with a wooden spoon, press with the same through a colander and sweeten to taste with sugar or Mellin's Food while warm.

Apple stew prepared as described above is wholesome, pleasant to the taste and slightly laxative to the bowels. It should be eaten with bread and butter or rice pudding, or with Mellin's Food Biscuits.

SIMPLE DRINKS FOR CHILDREN AND ADULTS

Ingredients:—One white of egg: half-a-tumbler of soda water: Mellin's Food to flavour.

To prepare:—Dissolve the Mellin's Food in the least possible quantity of warm water; add the white of egg and whip into a froth; pour into a glass and add the soda water.

WHITE OF EGG AND SODA WATER

Ingredients:—Half-a-tumbler of milk: half-a-tumbler of soda water.

To prepare:—Pour the milk into a tumbler and fill up with soda water. This renders the milk more digestible. The soda water tends to divide the casein of the milk into fine flakes and thus prevents the formation of hard indigestible clots of curd.

MILK AND SODA WATER

Ingredients:—Quarter-pound of sugar; one fine juicy lemon.

To prepare:—Remove in a thin layer the outer rind from the lemon, then remove the white pulp beneath which is to be thrown away; well pound up the lemon rind and pour it on to the strained juice of the fruit. Press the mixture into a jar, and when required for use, dissolve a tablespoonful of it in a glass of water. Or for immediate use the mixture may be placed in a jug and a pint of boiling water poured upon it; when cool it is ready for use.

LEMONADE

Ingredients:—Two juicy oranges; one juicy lemon; six lumps of sugar; one pint of boiling water.

To prepare:—Thinly peel the lemon, squeeze the juice from the oranges and the lemon into a jug, add the lemon peel and sugar, pour on the boiling water. Cover and strain when cold.

ORANGEADE

Ingredients:—One crust of bread, toasted deep brown and hard; one TOAST WATER pint of cold water.

To prepare: - Place the toasted bread in a jug, add fresh cold water and let it stand for one hour. Strain, and it is now ready for use.

The drink should be clear and of brownish colour.

Ingredients: - One ounce of rice; one quart of water; lemon peel.

RICE WATER

To prepare: - Wash well the rice with cold water, then soak for three hours in a quart of water kept at tepid temperature, afterwards gently boil the whole for one hour and then strain off the liquid. Place aside to cool and flavour with orange or lemon peel for use.

This drink is very useful in cases of diarrhœa.

Ingredients: -- Six juicy apples; white sugar; one quart of boiling water. APPLE WATE

To prepare: - Clean six juicy apples, and without removing peel or core. cut them into thin slices. Place in a large jug and add a few pieces of lemon rind, cut very thinly; pour on one quart of boiling water, and add white sugar to sweeten. Strain when cold.

Ingredients:-Quarter-ounce of gelatine; quarter-pint of hot barley GELATINE Al water; half-ounce of best loaf sugar; half-pint of hot milk.

MILK

SIMPLE DRINKS FOR CHILDREN AND ADULTS

To prepare:—Place the gelatine in a jug. Then pour the boiling barley water on to the loaf sugar in a separate vessel. When the sugar has dissolved, and while the mixture is still very hot, pour it on to the gelatine, then add the hot milk and stir well. The mixture is very useful in cases of vomiting and diarrhea, and is best given cold.

ALMOND

Ingredients:—One ounce of compound powder of almonds; half-pint of hot water.

To prepare:—Place the compound powder of almonds, which may be obtained from any chemist, in a clean jug, and pour on the hot water, which should not be boiling. Allow to stand for fifteen minutes, and then strain through muslin. This will be found a very useful and agreeable drink in cases of cold, bronchitis, or simple lung troubles.

NSEED TEA

Ingredients:—Half-ounce of whole linseed; half-ounce powdered white sugar; quarter-ounce liquorice root; a few drops of lemon juice; one pint of boiling water.

To prepare:—The whole linseed, not linseed meal, the sugar and liquorice root should be placed in a jug, and then one pint of boiling water should be poured over the whole. The jug then should be placed near the fire for four hours and then removed. When the contents are cool, the clear liquid should be strained off and a few drops of lemon juice added, sufficient to impart an agreeable flavour. This mixture will be found very soothing in cases of severe cough or chest troubles. It should be given warm.

AND ICED

Ingredients:—One tablespoonful Mellin's Food; sufficient cold boiled water to produce a thin paste; one glass soda water.

To prepare:—Place the Mellin's Food in a large glass, add the water and mix to a paste; pour on the soda water and stir the mixture.

This will be found a most refreshing and sustaining food beverage during the hot season, and it is taken with relish and advantage when other foods are repugnant.

For those suffering from the effects of sunstroke or typhoid this preparation has been used with the greatest benefit.

WITH SODA AND MILK

Ingredients:—One-third pint milk; two-thirds pint soda water; one tablespoonful Mellin's Food.

To prepare:—Well stir the Mellin's Food with the milk until the whole of the powder is dissolved, and then add iced soda water.

MELLIN'S FOOD FOR DYSPEPTICS

Ingredients:—Two tablespoonfuls of Mellin's Food; four fluid ounces milk; sufficient water to produce a paste with the Mellin's Food before mixing; one heaping teaspoonful cocoa,

To be taken morning and evening.

SIMPLE DRINKS FOR CHILDREN AND ADULTS

Ingredients:—One tablespoonful Mellin's Food; one half-pint milk; FOR THE three new laid eggs, well beaten up with the milk; salt to flavour. AILING

Ingredients:—One tablespoonful Mellin's Food; four fluid ounces milk; FOR NURSING enough water to make the Mellin's Food into a paste; one new-laid egg, MOTHERS beaten up with the milk.

To be taken three times a day, or more frequently,

Ingredients:—One tablespoonful Mellin's Food; four fluid ounces milk; FOR INVALIDS sufficient water to make the Mellin's Food into a paste; two tablespoonfuls sweet cream; one egg, beaten up with the milk,

Ingredients:-Two tablespoonfuls Mellin's Food; four fluid ounces FOR THE AGED milk; sufficient water to make a paste with the Mellin's Food.

Ingredients:—Three teaspoonfuls Mellin's Food; three fluid ounces water.

IN CASES OF CHOLERA, INFANTUM AND

TYPHOID

To be given cold at frequent intervals.

Mellin's Food may, with advantage, also be added to porridge, arrowroot, sago, rice, and other farinaceous food, to increase their nutritive value and digestibility.

USEFUL RECIPES

To prepare:—Place one pint of fresh milk in an enamelled saucepan, and warm it to blood heat (about 98° F. to 100° F.) then pour into a clean jug. Next add as much Rennet powder as will stand on a threepenny piece, or one teaspoonful of Rennet essence may be used instead. Stir well, stand in a warm place until firmly clotted, break up the clot by stirring, and strain through fine muslin. The clear liquid is Whey,

WHEY (about one pint)

To prepare:—To one pint of cold boiled water in a clean jug add as LIME WATER much freshly slaked lime* as will stand upon a sixpence, stir the mixture (one pint) thoroughly and stand aside for one hour; then pour off the clear liquid, taking care not to disturb the sediment at the bottom; or the milky mixture may be filtered through a piece of clean filter or white blotting-paper ten minutes after preparation. Preserve the solution in a well-stoppered bottle.

*The limelmay pe obtained at any chemists.

To prepare:—Take three teaspoonfuls of pearl barley, wash it first with cold water and then with hot water; throw away the washings. Add one pint and a half of water and boil slowly down to about one pint, stirring occasion-Strain when the boiling is completed. It is preferable to use a double boiler.

BARLEY WATER (one pint)

MEASURES OF CAPACITY.

1 minim 1 drop ---1 drachm 1 teaspoonful _=: 2 drachms == 1 dessertspoonful 4 drachms = 1 tablespoonful 60 minims 1 drachm (3) = 8 drachms -1 ounce (3) 20 ounces 1 pint 4 gills 1 pint 2 pints = 1 quart

AVOIRDUPOIS WEIGHT.

Standard Measure.

Popular Mea

mi One Minim	1 Drop
3i One Drachr (60 minims)	1 Teaspoonful
3ii Two Drachms	2 Teaspoonfuls or 1 Dessertspoonful.
3ii Two Drachms 3iv (Four Drachms or) 3ss (Half a Fluid ounce)	4 Teaspoonfuls or 1 Tablespoonful.
3i One Fluid ounce	2 Tablespoonfuls.
Oi One pint (₹xx)	1 Pint

Popular measures are very inaccurate, and if the dose of medicine is not marked on the bottle it should be measured in a medicine glass. Drops vary according to the thickness of the fluid. A teaspoon often contains ninety minims instead of sixty, and a tablespoon three-quarters of a fluid ounce instead of a half. The teaspoons found in households vary so greatly in capacity that they can seldom be relied on as measures. Mellin's Food, Ltd., have therefore devised a teaspoon which is strictly standardised to contain it of a fluid ounce. It is obtainable of all chemists, or post free from Mellin's Food, Ltd., Price 6d. A sherry wine glass holds about two fluid ounces, a teacup, four to six; a breakfast cup, six to eight; and a tumbler, ten. or half-a-pint.

Spoonfuls:—The directions in French and Belgian prescriptions often occasion a difficulty by reason of the ambiguity to an Englishman of the term *cuillerée* (spoonful). The new Belgian Pharmacopæia gives the following as the approximate fluid contents of various spoons:

La cuillerée à café (corresponding to the English teaspoonful) holds approximately 4 grams of water. La cuillerée à dessert (dessert spoon) holds 10 grams of water, and la cuillerée à soupe ou à bouche (the English tablespoonful) 15 grams of water. When the medical man indicates "spoonful" without any other designation the chemist understands the tablespoonful (ouillerée à soupe). Some people take their soup with a dessert-spoon, and hence arises another confusion as to the meaning of cuillerée à soupe.

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